IF SEARCH NEUTRALITY IS THE ANSWER, WHAT'S THE QUESTION?

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In recent months a veritable legal and policy frenzy has erupted around Google generally, and more specifically concerning how its search activities should be regulated by government authorities throughout the world in the name of ensuring "search neutrality." Concerns with search engine bias have led to a menu of proposed regulatory reactions. Although the debate has focused upon possible remedies to the "problem" presented by a range of Google's business decisions, it has largely missed the predicate question of whether search engine bias is the product of market failure or otherwise generates significant economic or social harms meriting regulatory intervention in the first place. "Search neutrality" by its very name presupposes that mandatory neutrality or some imposition of restrictions on search engine bias is desirable, but it is an open question whether advocates of search neutrality have demonstrated that there is a problem necessitating any of the various prescribed remedies. This Article attempts to answer that question and evaluates both the economic and non-economic costs and benefits of search bias, as well as the solutions proposed to remedy

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perceived costs. It demonstrates that search bias is the product of the competitive process and links the search bias debate to the economic and empirical literature on vertical integration and the generally-efficient and pro-competitive incentives for a vertically integrated firm to favor its own content. This Article concludes that neither an ex ante regulatory restriction on search engine bias nor the imposition of an antitrust "duty to deal" upon Google would benefit consumers. Moreover, it finds that the proposed remedies substitute away from the traditional antitrust consumer welfare standard and would impose costs exceeding any potential benefits.

I. INTRODUCTION

In recent months a veritable legal and policy frenzy has erupted around Google generally, and more specifically concerning how its search activities should be regulated by government authorities throughout the world in the name of ensuring "search neutrality." Concerns with search engine bias—a term this Article uses to describe the activities of a search engine exercising its editorial discretion in a manner that advantages its own or affiliated content or that disadvantages rivals—have led to a menu of proposed regulatory reactions ranging from the application of standard merger analysis under the antitrust laws to the creation of a new, independent agency—a "Federal Search Commission"—to investigate and regulate Internet search providers.

The debate has focused upon these and other proposed remedies to the "problem" presented by a range of Google's business decisions. Unfortunately, this debate has largely missed the predicate question of whether search engine bias is the product of market failure or otherwise generates significant economic or social harms meriting regulatory intervention in the first place. "Search neutrality" by its

very name presupposes that the solution—mandatory neutrality or some imposition of restrictions on search engine bias—is desirable, but it is an open question whether advocates of search neutrality have demonstrated that there is a problem necessitating any of the various prescribed remedies. This Article attempts to answer that question and evaluates both the economic and non-economic costs and benefits of search bias, as well as the solutions proposed to remedy perceived costs.

The Article proceeds as follows. Part II attempts to bring together the many disparate threads of the current discussion and to define search bias and search neutrality, terms that have taken on any number of meanings in the literature. It likewise surveys the literature's expressed regulatory concerns surrounding search bias and neutrality. Part III discusses the economics and technology of search. An understanding of the basic characteristics of the market is essential to understanding whether there is a problem and whether any particular remedy is likely to be effective in resolving it, if such a problem exists. Part IV evaluates the economic costs and benefits of search bias. It demonstrates that search bias is the product of the competitive process and links the search bias debate to the economic and empirical literature on vertical integration and the generally-efficient and pro-competitive incentives for a vertically integrated firm to favor its own content. Building upon this literature and its application to the search engine market, the Article concludes that neither an ex ante regulatory restriction upon search engine bias nor the imposition of an antitrust "duty to deal" upon Google would benefit consumers. Part V evaluates the frequent claim that search engine bias causes other serious, though less tangible, social and cultural harms. As with the economic case for search neutrality, it finds these non-economic justifications for restricting search engine bias unconvincing, and particularly susceptible to the well-known Nirvana Fallacy of comparing imperfect real world institutions with romanticized and unrealistic alternatives. Part VI analyzes several of the proposed remedies for allegedly harmful search bias. It finds that by

improperly and systematically disadvantaging Google while simultaneously advantaging its rivals, these remedies substitute away from the traditional antitrust consumer welfare standard, imposing costs exceeding any potential benefits.

II. DEFINING "SEARCH NEUTRALITY" AND "SEARCH BIAS"

The term "search neutrality"—increasingly wielded by scholars, regulators, and policymakers offering new regulations on Internet search providers—conceals a latent presumption. To describe an outcome as "neutral" is to explain it in relation to some other position, neither favoring one outcome nor another. In law and policy, neutrality implies system-wide indifference.[1] Using the term "search neutrality" presumes both a natural and correct conclusion to search outcomes as well as some biasing of those outcomes. Search neutrality, for good or ill, embraces a variety of policies designed to restore equipoise from distortion; it is a proposed remedy to the presumed problem of search bias. Any evaluation of search neutrality must therefore begin by identifying—and estimating the costs of—search biases before establishing the contours and likely consequences of search neutrality.

Establishing "search bias" requires reference to economic and technological first principles. Scarcity necessarily and fundamentally constrains the output of any search engine. The technological borderline-omniscience of Google may return only so many "hits,"[2] and basic logic and basic physics require that there is only one first search result, only one second search result, and so on. Observers generally acknowledge this phenomenon by conceding that search engines must somehow distinguish relevant results from

[1] BLACK'S LAW DICTIONARY 1140 (9th ed. 2009).

[2] Viva R. Moffat, *Regulating Search*, 22 HARV. J.L. & TECH. 475, 483 (2009).

irrelevant results.[3] With the rise of user-generated manipulations such as the "Google bomb," whereby users link disfavored pages to humorous or satirical key terms in order to skew results deliberately,[4] even this necessary sorting mechanism requires some measure of discretion. Search engines must further distinguish viable, consumer-friendly content from "link farms" and "spam logs," pages designed through inductive reference to search engines' algorithms to manipulate fully automated search rankings.[5] Even the most strident advocates of search neutrality generally concede that managing search results in these ways does not constitute impermissible search bias, whatever the meaning of the term.[6] Considering just these preliminary complications, the baseline for "search bias" is already difficult to define.

As used by advocates of search neutrality, search bias typically refers to rankings based upon some principle *other* than automated relevance. Adam Raff of Foundem, a vertical search engine operating in the United Kingdom and a vocal critic of Google, describes search bias as an editorial policy that generates search rankings in any way except to

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[3] *See, e.g.*, Oren Bracha & Frank Pasquale, *Federal Search Commission? Fairness, Access, and Accountability in the Law of Search*, 93 CORNELL L. REV. 1149, 1164–65 (2008); Urs Gasser, *Regulating Search Engines: Taking Stock and Looking Ahead*, 8 YALE J.L. & TECH. 201 (2006); James Grimmelmann, *Some Skepticism About Search Neutrality*, *in* THE NEXT DIGITAL DECADE 435, 442–43 (Berin Szoka & Adam Marcus eds., 2010).

[4] *See* Frank Pasquale, *Internet Nondiscrimination Principles: Commercial Ethics for Carriers and Search Engines*, 2008 U. CHI. LEGAL F. 263 (2008).

[5] Spam Blogs or "Splogs" are websites designed to link to advertisements or raise the PageRank of affiliated websites. These sites use software to copy nonsensical text that raises the chance that they will be indexed, searched, and clicked on. These websites are frequently returned on search engines and almost never relevant. *See* Charles C. Manne, *Spam + Blogs = Trouble*, WIRED, Sept. 2006, *available at* http://www.wired.com/wired/archive/14.09/splogs.html.

[6] *See, e.g.*, Bracha & Pasquale, *supra* note 3, at 1167–68 ("[S]earch engines filter and rank websites and, as such, they must favor some entities and disfavor others.").

yield comprehensive, impartial, and relevant returns.[7] Professors Oren Bracha and Frank Pasquale, meanwhile, adopt a broader definition, deeming any phenomenon that "involve[s] the manipulation or shaping of search engine results" as bias.[8] Concerned regulators, including the European Commission, typically focus upon search rankings that benefit the host search engine.[9] While avoiding the term "search bias," the European Commission describes its inquiry into Google in relevant part as conduct "lowering the ranking of unpaid search results" relative to paid advertisements.[10] Search neutrality advocates have not formed a clear consensus as to whether a search engine's search results must reflect a benefit to the search engine in order to constitute impermissible search bias. Therefore, one key issue in applying any search neutrality regime lies in distinguishing between search results that benefit and those that harm consumers.

Search bias may be understood more easily by reference to the problems that search neutrality advocates cite in proposing governmental regulation. These problems may be broadly classified in two channels: (1) competition law and antitrust problems arising from "non-objective" search results; and (2) social and cultural issues flowing from consumer use of search engines with non-transparent and "non-objective" results.[11] The former group generally focuses

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[7] Adam Raff, *Search, but You May Not Find*, N.Y. TIMES, Dec. 27, 2009, at A27.

[8] Bracha & Pasquale, *supra* note 3, at 1167.

[9] *See, e.g.*, Matt McGee, *US Senators Call for FTC Investigation into Google's Search Results*, SEARCH ENGINE LAND (Dec. 19, 2011, 6:02 PM), http://searchengineland.com/us-senators-call-for-ftc-investigation-into-googles-search-results-105131.

[10] Press Release, Europa, Antitrust: Commission Probes Allegations of Antitrust Violations by Google (Nov. 30, 2010), *available at* http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/1624.

[11] For a discussion of the insufficiency of current antitrust law to search engines, see Frank Pasquale, *Dominant Search Engines: An Essential Cultural & Political Facility*, *in* THE NEXT DIGITAL DECADE 401, 402 (Berin Szoka & Adam Marcus eds., 2010). For a discussion of the threat that search bias poses to democracy, see generally Bracha &

on potentially harmful effects to other firms as a result of a search engine's editorial and algorithmic decisions, while the latter emphasizes negative social effects.

Antitrust regulators, Google's rivals, and scholars propose a gamut of theories of competitive harm deriving from search bias. Several of these theories postulate that certain editorial decisions (whether manual or incorporated into a search engine's algorithm) constitute "monopolization" under American or European competition law. Of these monopolization theories, one argument tracks the "essential facilities" line of cases to propose that popular search engines, especially Google, act as a "bottleneck" to websites' access to consumers.[12] Under the relevant American line of cases, denial of access to such a resource could ground antitrust liability when a monopolist controls a resource essential to competing in a given market, duplicating that resource is practically impossible, and the monopolist denies rivals access to that facility although shared use with competitors is viable.[13] Applied to a search engine, the essential facilities theory supposes that Google essentially operates as a bottleneck to the Internet: that Google can effectively determine which end websites ultimately succeed and which fail.[14] Search neutrality advocates claim that Google effectively excludes nascent search websites and competitors from access to users and thus from both advertising revenue and consumer sales.[15]

An alternate, but related, monopolization theory claims that Google disadvantages its rivals by raising their costs relative to its own. This theory holds that Google uses its prominence as a search engine to favor other related Google

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Pasquale, *supra* note 3, at 1171–73. For a discussion of transparency issues, see James Grimmelmann, *The Structure of Search Engine Law*, 93 IOWA L. REV. 1 (2007).

[12] Pasquale, *supra* note 11.

[13] THOMAS F. COTTER, THE ESSENTIAL FACILITIES DOCTRINE, ANTITRUST LAW AND ECONOMICS 1–2 (Keith N. Hylton ed., 2008).

[14] Pasquale, *supra* note 11.

[15] Amir Efrati, *Rivals Say Google Plays Favorites*, WALL ST. J., Dec. 13, 2010, at B1.

ventures, such as its mail, calendar, and marketplace platforms.[16] By directing search traffic to its own products, this theory posits, Google effectively discriminates against rivals and forces them into more expensive substitute distribution channels.[17] Several studies analyze various key terms used through major search engines to conclude that search providers systematically skew results in favor of their own products, promoting their own downstream interests.[18] These critics speculate that such a bias harms rivals by foreclosing them from critical inputs, such as access to Internet consumers, or by forcing rivals to spend substantially more on distribution channels than would be necessary were search results "unbiased."[19]

The evolving technological backdrop of search engines specifically, and of the Internet generally, complicates each of these anticompetitive theories. Both proponents and opponents of intervention into or regulation of search engines acknowledge that robust innovation remains the sine qua non of novel consumer welfare benefits from search engine technology.[20] Search engines necessarily lower transaction costs, information costs, and search costs in ways

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[16] Steven Pearlstein, *Time to Loosen Google's Grip?*, WASH. POST, Dec. 15, 2010, at A14.

[17] Daniel Lyons, *They Might Be a Little Evil,* NEWSWEEK, June 1, 2009, at 24; Greg Sterling, *Once Again Should Google be Allowed to Send Itself Traffic?,* SEARCH ENGINE LAND (Dec. 13, 2010, 8:28 AM), http://searchengineland.com/once-again-should-google-be-allowed-to-send-itself-traffic-58543.

[18] *See* Benjamin Edelman & Benjamin Lockwood, *Measuring Bias in "Organic" Search* (Jan. 19, 2011), http://www.benedelman.org/searchbias/; *see also Background to EU Formal Investigation*, SEARCHNEUTRALITY.ORG (Nov. 30, 2010), http://www.searchneutrality.org/foundem-google-story/eu-launches-formal-investigation/. *But see* Danny Sullivan, *Study: Google "Favors" Itself Only 19% of the Time*, SEARCH ENGINE LAND (Jan. 19, 2011, 5:22 PM), http://searchengineland.com/survey-google-favors-itself-only-19-of-the-time-61675.

[19] *See* Efrati, *supra* note 15; Raff, *supra* note 7; Pearlstein, *supra* note 16.

[20] *See, e.g.*, Bracha & Pasquale, *supra* note 3, at 1186–87; Gasser, *supra* note 3; Eric Goldman, *Search Engine Bias and the Demise of Search Engine Utopianism*, 8 YALE J.L. & TECH. 188 (2006).

unforeseeable as recently as ten years ago.[21] The rise of the search engine has heralded entirely new business models and firms, each of which has increased consumer welfare through greater product differentiation, lower consumer prices and costs, and increased quantities of desirable products.[22] In order to preserve these consumer welfare gains, however, proponents and opponents of antitrust intervention into search engine markets must account for potential incentives and disincentives to innovate that would be created by prohibiting certain competitive practices among search engines. The potential competitive effects of deeming one type of search manipulation impermissible bias versus another as permissible sorting must necessarily inform any definition of search bias.

Search neutrality advocates also advance a number of transparency and cultural arguments to suggest that search result alteration constitutes impermissible search bias. These arguments typically begin from the premise that,

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[21] For instance, search engines have recently "personalized" search results, returning results that reflect users' past searches and site preferences. *See, e.g.*, Jessica Guynn, *New Google Feature Adds a Personal Touch to Search Results*, L.A. TIMES, Jan. 11, 2012, *available at* http://articles.latimes.com/2012/jan/11/business/la-fi-google-search-20120111; Greg Sterling, *Yahoo: We're Moving from Web of Pages to Web of Objects*, SEARCH ENGINE LAND (May 19, 2009, 4:36 PM), http://searchengineland.com/yahoo-were-moving-from-web-of-pages-to-web-of-objects-19524 ("The big idea (now familiar) is moving beyond '10 blue links' (popularized as a criticism of search by former Ask CEO Jim Lanzone) to a 'web of objects' . . . [which] more closely align[s] user intent with search results and map[s] those to real-world tasks."); Danny Sullivan, *Google Now Personalizes Everyone's Search Results*, SEARCH ENGINE LAND (Dec. 4, 2009, 6:18 PM), http://searchengineland.com/google-now-personalizes-everyones-search-results-31195 ("For example, let's say someone else prefers Barnes & Nobles. Over time, Google learns that person likes Barnes & Noble. They begin to see even more Barnes & Nobles listings, rather than Amazon ones.").

[22] *See, e.g.*, Hal Varian, Chief Economist, Google, Presentation: Economic Value of Google, *available at* http://assets.en.oreilly.com/1/event/57/The%20Economic%20Impact%20of%20Google%20Presentation.pdf (estimating that Google provides $65 billion of value to consumers in time saved).

because the Internet has risen to prominence as an information distribution mechanism, search engines increasingly act as the modern gatekeepers of that information.[23] Search engines closely guard their algorithms as trade secrets; accordingly, popular search engines refuse to fully disclose the methods by which they weight and rank search results.[24] Google's search algorithm is perhaps the most famous of these secrets.[25] Critics of search bias claim that these unknown formulas lead to a "black box" effect: consumers know neither the method through which search results are computed prior to any assigned "bias" nor the deliberate adjustments, if any, that search engines make.[26] Early courts addressing search engines' rights to alter their search results formulas regarded search results as speech protected under the First Amendment.[27] Transparency advocates liken search engines to a public good, stating that regardless of the protected characteristics of search result "speech," search engines enjoy an asymmetry of information and power necessitating some sort of governmental authority to monitor socially undesirable conduct.[28]

Each of these concerns revolves around a search engine deploying its algorithm or applying editorial discretion to advantage itself or to disadvantage rivals. Yet the word "bias" in search bias is itself pejorative and implies some sort of malign effect. As described above, however, some deviations from "standard" or "organic" search results (aimed at deterring spam or link farms, for example)[29] yield

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[23] Gasser, *supra* note 3.

[24] Grimmelmann, *supra* note 11, at 48.

[25] Steven Levy, *Exclusive: How Google's Algorithm Rules the Web*, WIRED (Feb. 22, 2010, 12:00 PM), http://www.wired.com/magazine/2010/02/ff_google_algorithm/all/1.

[26] Bracha & Pasquale, *supra* note 3, at 1202.

[27] *See, e.g.*, Langdon v. Google Inc., 474 F. Supp. 2d 622 (D. Del 2007); Kinderstart.com, LLC v. Google, Inc., C 06-2057 JF (RS), 2006 WL 3246596 (N.D. Cal. July 13, 2006); Search King, Inc. v. Google Tech., Inc., No. Civ 02–1457, 2003 WL 21464568 (W.D. Okla. May 27, 2003).

[28] Goldman, *supra* note 20.

[29] *See supra* note 5.

obviously benign results, including some beneficial to individuals totally unrelated to search engine providers.[30] Concerns over "search bias" must necessarily account for these externally favorable alterations. Multiple anecdotal consumer reports indicate that instances of search bias—defined as editorial control that may favor a search engine's own products—reduce searching costs and increase consumer enjoyment of popular search engines.[31] Consumers appreciate search engines' reduction of "drivel" or irrelevant links,[32] and novel sites with original content and with no relationship to search engines whatsoever often benefit from additional popularity due to the adjustment of search results.[33] A comprehensive definition of search bias for purposes of evaluating search neutrality must account for these positive effects of search engines' decisions to deviate from some imagined Platonic ideal of "organic," or unadulterated, search results.

Moreover, as the discussion above suggests, the very concept of bias in this context, defined against the backdrop of some objective ideal, is problematic. Alleged bias may be built into the algorithm itself and thus nearly impossible to recognize. Not only are search results and ad space scarce, requiring some mechanism to ration them (including via the price mechanism, in the case of advertisements), but there is an enormous range of possible "objective" arrangements for this rationing. Relevance is a slippery and subjective concept, different for every user and every query, and there is no a priori way to define it; as with pro- and anti-competitive conduct, it can be nearly impossible to differentiate between "relevant" and "manipulated" search

[30] For another example, Google indicates that local search is often "manipulated" to direct people to local business in the surrounding community, as they seem to want. *See* Carter Maslan, *Local Search: It's All About the Best Answers for Users*, GOOGLE PUBLIC POLICY BLOG (Dec. 13, 2010, 2:03 AM), http://googlepublicpolicy.blogspot.com/2010/12/local-search-its-all-about-best-answers.html.

[31] Efrati, *supra* note 15.

[32] Editorial, *The Google Algorithm*, N.Y. TIMES, July 15, 2010, at A30.

[33] Goldman, *supra* note 20.

results. Finally, and perhaps most importantly, search results may be offered in innovative ways, and it is a deep conceptual mistake to differentiate between so-called search products. In other words, search engines offer up results in the form not only of typical text results, but also maps, travel information, product pages, books, social media, and more. To the extent that alleged bias turns on a search engine favoring its own maps, for example, over another firm's, the allegation fails to appreciate that text results and maps are variants of the same thing, and that efforts to restrain a search engine from offering its own maps is no different than preventing it from offering its own search results.

Search neutrality must therefore be considered as a regulatory intervention designed to rectify these biases—calling forth familiar doctrinal concerns in determining the propriety of any remedy. Specifically, we define search neutrality as the a priori restriction of search engines against delivering search results intended to benefit affiliated content or to harm rival content. As such, advocates of search neutrality must address, and potential regulators must consider, both the additional administrative and search costs of any search neutrality regime as well as the potential error costs from incorrectly identifying results (say, condemning them as "inappropriately harming a rival") within "organic" searches. Even advocates of relatively strict neutrality regimes attempt to sort benign forms of search bias from self-interested forms, deeming the former a principle of perceived "relevance."[34] Furthermore, any potentially beneficial gains from search bias, broadly conceived, must be weighed against the net harms avoided. It is impossible to effectively evaluate these costs and harms without a detailed understanding of both the technological and economic regime governing search engines. Accordingly, this Article next turns to discussing each.

[34] Raff, *supra* note 7.

III. SOME BASIC ECONOMICS AND TECHNOLOGY OF SEARCH

Search engines generate two classes of results in response to an inquiry: (1) "organic" or "natural" search results; and (2) advertiser-sponsored links.[35] Organic results cost nothing to the websites they link, regardless of source; search algorithms generally organize organic results by relevance.[36] Google, for example, determines a website's relevance in part by the number of websites that link to it.[37] Sponsored links pay a search engine directly for premium placement; the fees for such placement often depend upon the relevant keywords linked to the advertisement as well as the number of "click-through" customers the website draws.[38] Upon entering search terms, a user is simultaneously delivered an organic and a paid search results list, each in descending order by value.[39]

This value depends upon complicated technological and language models designed to evaluate the relative value of linked pages.[40] Search algorithms generally parse the content of the websites themselves to best answer a user's

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[35] Geoffrey A. Manne & Joshua D. Wright, *Google and the Limits of Antitrust: The Case Against the Case Against Google*, 34 HARV. J.L. & PUB. POL'Y 171 (2011); *see also* Grimmelmann, *supra* note 11, at 23.

[36] *See How Google Works*, GOOGLE GUIDE, http://www.googleguide.com/google_works.html (last visited Mar. 5, 2012); Manne & Wright, *supra* note 35.

[37] *How Google Works*, GOOGLE GUIDE, *supra* note 36. Leading "organically" to, among other things, "Google bombing" which is a phenomenon where groups of people or programs artificially link specific terms to search results. The most famous example was liberal political groups linking the name "George W. Bush" to the search result "miserable failure." *See* Noam Cohen, *Google Halts "Miserable Failure" Link to President Bush*, N.Y. TIMES, Jan. 29, 2007, at C6.

[38] Manne & Wright, *supra* note 35.

[39] Pasquale, *supra* note 11; Manne & Wright, *supra* note 35.

[40] Manne & Wright, *supra* note 35, at 193. Search engines use complex proprietary "ranking algorithms." Goldman, *supra* note 20, at 114.

inquiry.[41] They then attempt to ascertain the context and nature of the user's question in order to determine what factors—such as date, age of source, credibility of websites linking to the site in question, and so on—should sort the relevant results.[42] In the case of paid results, some search engines price advertising costs in part on the nature of the page to be advertised; the greater difference between that page's organic result and the desired keyword metric, the greater the advertising costs.[43] Search engine users are not charged for using either organic or paid links to pages.[44]

In order to offer these results and to maintain their relevance against a perpetually changing Internet background, search engines must constantly update their algorithms, as well as develop new and better formats for presenting and organizing results. Thus:

> Google's algorithm depends on more than 200 different factors. Google makes about 500 changes to it a year, based on ten times as many experiments. One sixth of the hundreds of millions of queries the algorithm handles daily are queries it has never seen before. The PageRank of any webpage depends, in part, on every other page on the Internet. And even with all the computational power Google can muster, a full PageRank recomputation takes weeks.[45]

At the same time, search engines have continually evolved, not only through technical updates to their algorithms, but also through other "under the hood" technical updates (as when Google revamped its indexing architecture in 2010), and through alterations to the format of their results (as when Google introduced Image Search in

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[41] *See Results Page*, GOOGLE GUIDE, http://www.googleguide.com/results_page.html (last visited Mar. 5, 2012).

[42] Manne & Wright, *supra* note 35, at 192–93; Udi Manber, *Introduction to Google Search Quality*, OFFICIAL GOOGLE BLOG (May 20, 2008, 6:20 PM), http://googleblog.blogspot.com/2008/05/introduction-to-google-search-quality.html.

[43] Manne & Wright, *supra* note 35, at 193.

[44] *See How Google Works*, GOOGLE GUIDE, *supra* note 36.

[45] Grimmelmann, *supra* note 3, at 455.

2001, Product Search (initially Froogle) in 2002, and Maps in 2005).[46]

Meanwhile, the entire enterprise is complicated by the system of monetization, necessitating a parallel system for rationing paid search terms and for ensuring their relevance. For paid results, the relative weighting system effectively disciplines both advertisers and the search engine itself. In an unweighted system, a less-relevant result could afford to bid highly on a popular website keyword, such as Coca-Cola.[47] For example, Pepsi would obviously prefer to be the first website shown when users search for Coca-Cola, but Pepsi could expect that, on average, users searching for Coca-Cola would find Pepsi's website less relevant than Coca-Cola's, and would therefore click on Pepsi's link less often. Absent weighting, because Pepsi would actually pay only per click, Pepsi's expected cost to bid on the relevant keywords could be lower than Coca-Cola's—even if it were to bid a higher price per click than Coca-Cola and thus to secure higher placement. At the same time, under a flat pricing system, a small difference in marginal price-per-click for Coca-Cola could lead to a large aggregate price increase through the larger number of user visits as, on balance, users searching for Coca-Cola would likely find Coca-Cola's website more relevant than Pepsi's. Thus, an unweighted system could result in higher costs to Coca-Cola as well as "inaccurate" search results. This distortion can potentially degrade the search engine experience as users find themselves directed to lower-quality links. The price weighting system forces potential advertisers to internalize some of the costs of this degradation by charging proportionally more the greater the difference between the desired result's spot and the organic relevance of the website in question. In theory, this system ensures that results are

[46] For a comprehensive history of Google's product evolution, see *Google History*, GOOGLE, http://www.google.com/about/corporate/company/history.html (last visited Mar. 5, 2011).

[47] HOWIE JACOBSON, GOOGLE ADWORDS FOR DUMMIES 1–3 (2d ed. 2009).

not gamed and that the value of the platform is maintained for users, advertisers, and the platform itself.[48]

Search engines must price discipline potential advertisers, as search engines themselves encounter price discipline through competing distribution channels.[49] In colloquial use, Google, Microsoft, and Yahoo! comprise virtually the entire American "search market."[50] However, the economic analysis is far less clearly delineated. Search engines compete vigorously with both online and offline firms for influence with consumers. Within the online world, search engines compete with one another as well as with non-search engine sources. For example, a majority of search engine users rely upon multiple search engines,[51] as Google often points out.[52] While a number of computer users begin with a search engine as an access point to the Internet, many more do not.[53] Social networking websites, such as Facebook (which has now displaced Google as the most visited site on the Internet),[54] MySpace, and Twitter

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[48] *Ads*, GOOGLE GUIDE, http://googleguide.com/ads.html (last visited Mar. 5, 2012).

[49] Manne & Wright, *supra* note 35, at 202–03.

[50] Stephen Shankland, *Google's U.S. Search Share Nears 70 Percent*, CNET NEWS (July 15, 2008, 12:53 PM), http://news.cnet.com/8301-1023_3-9991866-93.html.

[51] *See* Qi Guo et al., *Why Searchers Switch: Understanding and Predicting Engine Switching Rationales* (July 2011), http://research.microsoft.com/en-us/um/people/sdumais/sigir2011-searchengineswitching-fp348-guo.pdf ("The barrier to switching Web engines is low and multiple engine usage is common. Indeed, prior work in this area suggests that 70% of Web searchers use multiple search engines."); *see also* Manne & Wright, *supra* note 35, at 194–95.

[52] *The Google Algorithm*, *supra* note 32.

[53] David Gelles, *Facebook's Grand Plan for the Future*, FIN. TIMES (Dec. 3, 2010, 5:24 PM), http://www.ft.com/cms/s/2/57933bb8-fcd9-11df-ae2d-00144feab49a.html#axzz1H27SlrZM.

[54] *Facebook Was the Top Search Term for Third Year Straight*, EXPERIAN HITWISE (Dec. 21, 2011), http://www.hitwise.com/us/about-us/press-center/press-releases/facebook-was-the-top-search-term-for-2011/ ("Facebook was the top-visited Website for the second year and accounted for 10.29 percent of all U.S. visits between January and November 2011—

heighten consumers' ability to discuss, compare, and recommend both websites and products—competing with search engine advertisements as well as amplifying the utility of other, traditional forms of advertisement.[55] Each of these forces effectively disciplines search engines toward relevant, useful results, as defined by consumers in light of available substitutes. "General" search engines, such as Google and Yahoo!, also compete with "vertical" search engines, which focus upon one or more specific types of content. For instance, Amazon provides vertical search services in books and media, Orbitz in travel services, and eBay in various consumer goods.[56]

In addition to online competition, evidence suggests that search engines compete with other distribution mechanisms for advertisement revenue.[57] Pepsi provides a pointed example, declining to purchase a television advertisement in Super Bowl 2010 explicitly in favor of increasing its Internet

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a 15 percent increase from 2010."); *see also November 2011—Top US Web Brands*, NEILSON WIRE (Dec. 30, 2011), http://blog.nielsen.com/nielsenwire/online_mobile/november-2011-top-u-s-web-brands/ (finding that U.S. visitors spend approximately four times as much time on Facebook as on Google).

[55] Gelles, *supra* note 53; Heather Leonard, *The Google Investor: Competition With Facebook Heats Up*, BUS. INSIDER (June 29, 2010, 1:07 PM), http://www.businessinsider.com/the-google-investor-google-facebook-june-29-2010-6.

[56] Press Release, Europa, *supra* note 10; Randy Stutz, *An Examination of the Antitrust Issues Posed by Google's Acquisition of ITA*, AM. ANTITRUST INST. (Feb. 18, 2011), http://www.antitrustinstitute.org/sites/default/files/Google-ITA%20AAI%20White%20Paper2.18.11.pdf.

[57] *See* KinderStart.com, LLC v. Google, Inc., No. C06-2057 JF (RS), 2007 WL 831806, at *6 (N.D. Cal. Mar. 16, 2007) ("[T]here is no logical basis for distinguishing the Search Ad Market from the larger market for Internet advertising."); Robert W. Hahn & Hal J. Singer, *An Antitrust Analysis of Google's Proposed Acquisition of DoubleClick* 5, 24–32 (AEI-Brookings Joint Center for Regulatory Studies, Working Paper No. 07–24, 2008), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1016189 (explaining that purchasers of online advertisements see search ads as substitutes for other forms of online advertising).

presence.[58] Other broadcast and print advertisements also necessarily compete with search engines to reach end-product consumers.[59] At least one study suggests that online and offline advertising sources respond to pricing changes and to the availability of their counterpart channels.[60] Accordingly, it is challenging to delineate accurately a given search engine's market share—a necessary pre-condition to determining market power and thus to antitrust enforcement under Section 2 of the Sherman Act.[61]

In their efforts to surmount these and other challenges to articulating a cognizable antitrust claim, some search neutrality proponents cite the "network effects" of Google and other prominent search engines as either justifying or necessitating search neutrality.[62] A "network effect" exists when the value of a good or service increases correspondingly with additional use by other users.[63] Facebook, for example, provides positive network effects through increased use, as each additional user is able to access a greater variety of individuals at no cost.[64] These network effects typically prove pro-competitive, increasing service value to consumers

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[58] Larry D. Woodard, *Pepsi's Big Gamble: Ditching Super Bowl for Social Media,* ABC NEWS (Dec. 23, 2009), http://abcnews.go.com/Business/pepsis-big-gamble-ditching-super-bowl-social-media/story?id=9402514#.TxT9nWNWrdc.

[59] *See In re* Google/DoubleClick, File 071-0170, 2007 WL 4624893, at *3 (F.T.C. Dec. 20, 2007).

[60] Avi Goldfarb & Catherine Tucker, *Search Engine Advertising: Channel Substitution When Pricing Ads to Context* 96 (NET Institute Working Paper No. 07-23, 2007), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1021451&rec=1&srcabs=10084.

[61] Sherman Antitrust Act, 15 U.S.C. § 2 (2006).

[62] *In re Google/DoubleClick,* 2007 WL 4624893, at *13–*14 (Dissenting Statement of Commissioner Pamela Jones Harbour); *see also* Bracha & Pasquale, *supra* note 3, at 1181.

[63] Stan J. Liebowitz & Stephen E. Margolis, *Network Externality: An Uncommon Tragedy,* 8 J. ECON. PERSP. 133, 135 (1994).

[64] KEN AULETTA, GOOGLED: THE END OF THE WORLD AS WE KNOW IT (2009).

and businesses.[65] Critics theorize—albeit without empirical support—that a search engine's network effects may themselves present competitive concerns.[66] As network effects grow, they naturally increase the value and often decrease the marginal cost of providing the relevant service. For example, according to one search neutrality advocate, each search provides a given website a new opportunity to "perfect its algorithm" and thereby to provide users with a better search experience.[67] Critics imply that these effects increase a dominant search engine's market power, rendering competition by start-up search engines difficult and entrenching established firms' ability to manipulate search data for their own benefit.[68]

Yet it is not clear that search engines similarly benefit from network effects. Unlike Facebook, search engine users do not gain from being able to participate in a network with more users. Advertisers, both in traditional as well as online media, often care about the type of individual reached by a new advertisement; an additional amount of traffic without

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[65] *See* William D. Rahm, *Watching over the Web: A Substantive Equality Regime for Broadband Applications*, 24 YALE J. REG. 1, 15–16 (2007); J. Gregory Sidak, *A Consumer Welfare Approach to Network Neutrality Regulation of the Internet*, 2 J. COMPETITION L. & ECON. 349, 454 (2006).

[66] *See, e.g.*, Kristine Laudadio Devine, *Preserving Competition in Multi-Sided Innovative Markets: How Do You Solve a Problem Like Google?*, 10 N.C. J.L. & TECH. 59 (2008); Kevin Werbach, *Only Connect*, 22 BERKELEY TECH. L.J. 1233, 1292 (2007) ("Nonetheless, it is possible for applications to become exclusive platforms with anticompetitive effects similar to those of exclusive physical broadband networks. Google's dominant search engine and MySpace's massive social networking site might be candidates for such scrutiny at some point in the future. Because these are network-centric applications, whatever ability they have to distort competition and innovation arises from their ability to capture network effects.").

[67] Bracha & Pasquale, *supra* note 3, at 1181 ("The more searches an engine gets, the better able it is to sharpen and perfect its algorithm. The result is that each additional user decreases the cost of a better quality service for all users. Thus, incumbents with large numbers of users enjoy substantial advantages over smaller entrants.").

[68] *Id.*; *see also* Werbach, *supra* note 66, at 1292.

additional sales may well be of *negative* value to a vendor under the click-through system.[69] Furthermore, advertisers and users act on fundamentally different incentives with regard to the growth of the search engine. Advertisers care about the quality or type of individual clicking on the relevant advertisement, while search engine users care about the quality of results provided by the engine.[70] The search engine must manage these competing incentives through its differential pricing and application of search biases to retain both a user base and advertisement sales.[71] In this capacity, a search engine operates as any other two-sided market platform, balancing asymmetrical incentives between consumers on one side and advertisers on the other.[72]

IV. DOES SEARCH BIAS HELP OR HARM CONSUMERS?

The question remains whether a search engine's use of its search algorithm to direct traffic to its own services harms competition and consumers.[73] The economics literature has extensively examined the competitive dynamics that arise when a business firm operates at multiple levels in the same chain of distribution—such as when Ralph Lauren both manufacturers clothing and sells it through its own retail outlets. The economic merits of search neutrality ultimately

[69] Manne & Wright, *supra* note 35; Manber, *supra* note 42.

[70] David S. Evans, *The Economics of the Online Advertising Industry*, 7 REV. NETWORK ECON. 359 (2008).

[71] David S. Evans & Michael D. Noel, *Defining Markets That Involve Multi-Sided Platform Businesses: An Empirical Framework with an Application to Google's Purchase of DoubleClick* 4 (AEI-Brookings Joint Ctr. for Regulatory Studies, Working Paper No. 07–18, 2007), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1089073.

[72] James Grimmelmann, *How to Fix the Google Book Search Settlement*, 12 J. INTERNET L. 1, 14 (2009) ("Thus, Google's first-past-the-post status here could easily turn into a durable monopoly. That might be the inevitable result anyway; this is a market with substantial economies of scale and positive network effects.").

[73] This Article postpones discussion of whether search bias inflicts non-economic harm to Part IV.

reduce to a question of the costs and benefits of vertical integration.

The economics literature has explored these questions before: indeed, it is replete with examinations of the incentives of a vertically integrated firm to promote its own products or to invest more heavily in the distribution of its own products or content.[74] The key question is whether such a bias benefits consumers or inflicts competitive harm. Economic theory has long understood that vertical integration generally yields significant welfare benefits;[75] modern economic theory also teaches that, under some conditions, vertical integration and contractual arrangements can create a potential for competitive harm that must be weighed against those benefits.[76] A thorough economic analysis requires the fact-intensive evaluation of these competing possibilities rather than a bright-line rule or ex ante prohibition on search bias that would deter some pro-competitive business conduct and harm consumers.

A. The Allegations of Search Bias

The *TradeComet* complaint adequately represents many of the concerns Google's competitors raise in U.S. courts and with U.S. or European competition agencies, as well as the broader concerns of advocates of search neutrality.[77] One element of this complaint is that Google employs its quality

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[74] *See, e.g.*, James C. Cooper et al., *Vertical Antitrust Policy as a Problem of Inference*, 23 INT'L J. INDUS. ORG. 639 (2005); Paul Joskow, *Vertical Integration*, *in* HANDBOOK OF NEW INSTITUTIONAL ECONOMICS 319, 319–48 (Claude Ménard & Mary M. Shirley eds., 2005); Benjamin Klein & Kevin M. Murphy, *Vertical Restraints as Contract Enforcement Mechanisms*, 31 J.L. & ECON. 265 (1988).

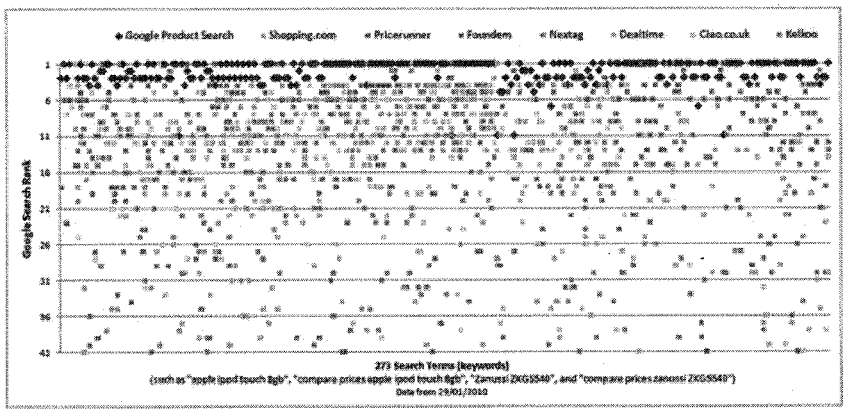
[75] *See, e.g.*, AUGUSTIN COURNOT, RECHERCHES SUR LES PRINCIPES MATHEMATIQUES DE LA THEORIE DE RICHESSES (1838); *see also infra* note 94.

[76] *See, e.g.*, Steven C. Salop & David T. Scheffman, *Cost-Raising Strategies*, 36 J. INDUS. ECON. 19 (1987).

[77] Complaint ¶ 76, TradeComet.com LLC v. Google, Inc., 693 F. Supp. 2d 370 (S.D.N.Y. 2010) (No. 09 Civ. 1400). For a comprehensive discussion of the *TradeComet* complaint, see Manne & Wright, *supra* note 35, at 228–32, 239–42.

score—which rivals complain it has kept secret—to preclude access by competitors to its top ad results and to increase the payments required of competitors for top placement.[78] Similar complaints arise in the context of organic search results.[79] In each case, the core of the economic case against search bias is that Google has the incentive to (and does in fact) discriminate in favor of its own products in allocating scarce and valuable search result real estate, and thus necessarily discriminates against rivals. For example, Searchneutrality.org submitted the following descriptive analysis of Google's search bias: for the 271 search keywords examined, Google's own "Google Product Search" (the darkest dots in the graph) systematically receives high search placement.[80]

FIGURE 1: GOOGLE PRODUCT SEARCH RANKINGS



[78] *See* Daniel Lyons, *They Might Be a Little Evil,* NEWSWEEK, June 1, 2009, at 24; Joe Nocera, *Stuck in Google's Doghouse,* N.Y. TIMES, Sept. 13, 2008, at C1. This Article discusses the antitrust issues raised by the *TradeComet* complaint elsewhere, rejecting the claim that Google's use of its quality scores (accepting the facts in the Complaint) would create an antitrust duty to deal under existing law. *See also* Manne & Wright, *supra* note 35, at 192–94.

[79] *Background to EU Formal Investigation*, SEARCHNEUTRALITY.ORG (Nov. 30, 2010), http://www.searchneutrality.org/foundem-google-story/eu-launches-formal-investigation/.

[80] *Id.*

To emphasize this point, search neutrality advocates point to Edelman and Lockwood's August 2010 analysis of search bias.[81] Edelman and Lockwood formed a list of thirty-two search terms for services commonly provided by search engines (e.g., "email," "calendar," and "maps") and executed searches using those terms on Google, Yahoo!, Bing, Ask, and AOL.[82] The study's small sample size prohibits broad generalizations. Nonetheless, this Article discusses it because it helps highlight some important economic distinctions between the concept of search engine bias and inferences of consumer harm. After conducting searches for each of these thirty-two terms across each search engine, the authors examine whether these search engines are more likely to exhibit a bias in favor of their own affiliated pages. They conclude that "both Yahoo and Google are much more likely to place their own pages first, relative to other search engines, and these differences are significant at the 1% level for Yahoo and the 2% level for Google."[83]

The finding that search engine bias is ubiquitous is not surprising. The fact that search engines such as Yahoo!—which certainly do not have market power[84]—exhibit similar

[81] Edelman & Lockwood, *supra* note 18. Danny Sullivan has observed that the timing of the study is an issue for generalizing its results because at the time of the study, Yahoo! was providing its own results, but is now powered by Bing. *See* Sullivan, *supra* note 18.

[82] Edelman & Lockwood, *supra* note 18.

[83] *Id.*

[84] Yahoo!'s share of the search engine market is approximately 15%. Brian Womack, *Google Increases U.S. Search Market Share as Yahoo Slips, ComScore Says*, BLOOMBERG (Nov. 9, 2011, 6:17 PM), http://www.bloomberg.com/news/2011-11-09/google-gains-u-s-search-market-share-in-october-comscore-says.html. Monopoly power requires a demonstration that the defendant controls a substantial degree of market power, allowing it to affect market price or output. While the precise percentage necessary to prove monopoly power is case and fact specific, "it would be rare indeed to find that a firm" with just 50% of a market held such power. 2B PHILLIP E. AREEDA ET AL., ANTITRUST LAW ¶ 532c (3d ed. 2007); *see also infra* note 127. Clearly, then, Yahoo!'s market share is insufficient to constitute monopoly power.

bias suggests that the practice is not anticompetitive.[85] Moreover, the incentive for a vertically integrated firm to discriminate in favor of its own products is also ubiquitous. Indeed, the more appropriate policy question is whether such bias ultimately benefits or harms consumers. Edelman and Lockwood do not locate their analysis within the industrial organization literature on this subject, but do consider whether search engine bias is "appropriate," or a function of "user preferences."[86] Here, Edelman and Lockwood make an attempt to distinguish "bias" from "user preference" by evaluating click-through data for selected terms. The authors report, unsurprisingly, that "across all search engines and search terms, the first result received, on average, 72% of users' clicks, while the second and third results received 13% and 8% of clicks, respectively."[87] Consumer behavior, the authors conclude, is consistent with the user-preference hypothesis, which postulates that a search engine ranks its own products highly in part because its users prefer them.[88] These results suggest that search engines compete vigorously to satisfy consumer preferences. A well-functioning competitive process ought to yield different search engines using different algorithms, exhibiting different inherent biases, and even attracting

[85] The Supreme Court has described the Sherman Act as a "consumer welfare prescription," whose goal is to protect competition and not competitors. Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979); see also Brown Shoe Co. v. United States, 370 U.S. 294 (1962). Accordingly, conduct that is detrimental to consumer welfare is anticompetitive, while conduct that merely harms rivals (such as by causing them to lose sales and forcing them to charge lower prices) is not.

[86] Edelman & Lockwood, *supra* note 18.

[87] *Id.*

[88] For example, Edelman and Lockwood report that Google and Yahoo "each list their own maps service as the first result for the query 'maps.'" *Id.* "Our CTR data indicates that Google Maps receives 86% of user clicks when the search is performed on Google, and Yahoo Maps receives 72% of clicks when the search is performed on Yahoo." *Id.*

different sets of consumers—precisely what the marketplace exhibits.[89]

Both these techniques and this result are unremarkable from an economic perspective. Supermarkets, bookstores, and other retail and distribution outlets facing downward sloping demand curves all exercise some discretion over how products are allocated on shelves, promoted, and featured. Just as it would not be surprising that Coca-Cola enjoyed greater sales with a retail outlet that had entered into a preferential contract with Coca-Cola for "eye-level" shelf space, neither is it a great surprise that consumers click through content that is first on the search listing in greater numbers. Nothing in this pattern of consumer behavior is suggestive of a competitive failure.

Edelman and Lockwood provide one additional example that they describe as highly suggestive of bias that is not driven by consumer preferences. The authors identify ranking "inversions" where a more highly ranked result receives fewer clicks than lower ranked results. They use the example of "email," where Gmail is the first result listed on Google and receives 29% of the users' clicks while Yahoo! mail (the second result) receives 54%.[90] However, evidence that lower ranked search engine listings sometimes outperform higher ranked listings for affiliated products or services is not indicative of competitive harm. The fact that consumers who prefer the lower listed result (e.g., Yahoo! mail, which is listed second on Google) click to that service in large numbers suggests that consumers with strong preferences for Yahoo! mail have those preferences satisfied

[89] *See, e.g.*, Danny Sullivan, *Dear Bing, We Have 10,000 Ranking Signals To Your 1,000. Love, Google*, SEARCH ENGINE LAND (Nov. 11, 2010, 1:20 PM), http://searchengineland.com/bing-10000-ranking-signals-google-55473.

[90] Edelman & Lockwood, *supra* note 18. The authors report that other terms exhibit "a similar inversion for individual days in our data set, though 'email' is the only term for which the difference is large and stable across the entire period." *Id.* They also find similar inversions on Yahoo!; for example, Edelman and Lockwood observe that video.yahoo.com is the first search result on Yahoo!, but receives just 21% of clicks whereas youtube.com receives 39%, despite the fact that it is ranked second. *Id.*

even when it is listed second. Consumers with no preference or mild preferences between email listings (e.g., a consumer looking to open a new account) may well be influenced by the top-level listing. Yet the lack of preference similarly suggests zero or little welfare loss for that consumer.

Consider again the example of preferential "listings" on supermarket shelf space as between competing cola suppliers Coca-Cola and Pepsi. Assume that Coca-Cola signs a contract with a supermarket that guarantees it the "eye-level" shelf space, which is well-known to shift some additional sales to the products displayed in that space.[91] In these supermarkets, Coca-Cola is not sold exclusively. Indeed, Pepsi products are sold on the less valuable shelf space below eye-level. A full economic analysis of the competitive effects of the shelf-space bias in favor of Coca-Cola would have to consider several factors. First, the shelf space contracts might better align incentives to promote the product, resulting in greater output and consumer gains.[92] Second, consumers with strong preferences for Coca-Cola are not harmed. Consumers with no strong brand preference may select the more highly ranked soda; indeed, this is one reason why soda companies are willing to pay for the shelf space and competition between these companies can create further consumer benefits.[93] But these consumers do not experience welfare losses. Consumers with strong preferences for the "discriminated against" brand (Pepsi, in this case) may be harmed if the preferential listing forecloses them from the opportunity to satisfy those preferences. However, Edelman and Lockwood's analysis finds precisely the opposite: when Google or Yahoo! exhibits bias in favor of its own listings, these "inversions" suggest that consumers

[91] *See, e.g.*, Joshua D. Wright, *Slotting Contracts and Consumer Welfare*, 74 ANTITRUST L.J. 439 (2007).

[92] Benjamin Klein & Joshua D. Wright, *The Economics of Slotting Contracts*, 50 J.L. & ECON. 421, 426–28 (2007); Klein & Murphy, *supra* note 74, at 295; Benjamin Klein & Kevin M. Murphy, *Exclusive Dealing Intensifies Competition for Distribution*, 75 ANTITRUST L.J. 433, 437–38 (2008).

[93] Klein & Wright, *supra* note 92, at 426–27.

with preferences for the non-featured brand are not foreclosed from satisfying those preferences. Quite to the contrary, consumers can typically express these preferences simply by clicking on the lower listed ranking.

Like that of most search neutrality proponents, Edelman and Lockwood's analysis is also critically incomplete in that it overlooks the fact that both the economics of vertical integration and its competitive effects are well-known.[94] Indeed, the same economic issues arise even without vertical ownership of both content and distribution; in other words, firms will sometimes find it efficient to replicate the same business arrangements by contract rather than ownership.[95] Thus, as discussed above, retail intermediaries are often observed entering into preferential promotion or display contracts with product manufacturers. For example, supermarkets and other retail outlets receive payments for committing prime real estate to certain products, or often grant that space to their own private label products.[96] Retail bookstores also enter into similar contractual relationships with publishers. Unsurprisingly, the incentives faced by Google and other search engines are similar to those faced by other vertically-related firms in the modern economy.

The frequency and commonality of these arrangements demonstrate that they are profitable, and tend to suggest they are generally efficient, but this alone does not show that search engine bias follows this general trend. Such an analysis depends in large part upon the expected pro-competitive efficiencies from the particular arrangements at issue as well as the constraints upon Google's incentives to

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[94] COURNOT, *supra* note 75; Michael H. Riordan & Steven C. Salop, *Evaluating Vertical Mergers: A Post-Chicago Approach*, 63 ANTITRUST L.J. 513, 519 (1995); Michael A. Salinger, *Vertical Mergers and Market Foreclosure*, 103 Q.J. ECON. 345 (1988); Steven C. Salop & David T. Scheffman, *Cost-Raising Strategies*, 36 J. INDUS. ECON. 19, 32 (1987).

[95] OLIVER E. WILLIAMSON, MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS (1975); Ronald Coase, *The Nature of the Firm*, 4 ECONOMICA 386 (1937); Benjamin Klein, Robert G. Crawford & Armen A. Alchian, *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J.L. & ECON. 297, 302 (1978).

[96] *See* Klein & Wright, *supra* note 92.

anticompetitively foreclose rivals from access to its prime search real estate. This Article now turns to the general economic framework and to its specific application to search engine bias.

B. The Competitive Effects of Search Bias

1. Potential Competitive Benefits

Vertical integration of a search engine and a producer in an ancillary market can have several competitive benefits. The most obvious potential competitive benefit of vertical integration is mitigating "double marginalization," thus leading to lower prices by avoiding paying an intermediary.[97] Perhaps most important in the search engine context is that vertical integration might create incentives to innovate and create new products and mechanisms to efficiently deliver those products to consumers. Examples of this type of efficiency include Google Maps and Google Images, both of which combine Google's search function with a novel method of presenting desired information to consumers (e.g., a map or pictures). This type of integration is, in fact, a core part of Google's business model. As others have observed:

> [Google has] offered more than web search for a very long time. Image searches, for example, stretches back to 2001. It is a search company. It is supposed to offer search products. It makes no sense to expect those search products to be merely listing web pages. If people are doing shopping searches on Google, it should evolve its product to have a specialized shopping tool. That's what its users want. Sure, that might hurt other shopping sites out there. Or, it might not, if they offer a better shopping search than Google. But it's a ridiculous argument that Google should somehow send every shopping query out to another shopping search engine. Imagine if you did a web search for something, say "iPhone," and every

[97] Francine Lafontaine & Margaret Slade, *Vertical Integration and Firm Boundaries: The Evidence*, 45 J. ECON. LIT. 629, 663–64 (2007).

> link you got led to Bing, Yahoo and other search engines, which in turn showed their results for iPhone. That's crazy. You came to Google for answers, to be lead directly to sites with those answers, not to be sent to another search engine and forced to search again.[98]

Where these competitive benefits exist, vertical integration and search bias might well cause harm to competing products as is often the case in the competitive process, but consumers would be made better off.

2. Potential Competitive Harms

Foreclosure is the fundamental competitive issue raised by vertical integration.[99] Google's search bias raises two theoretical foreclosure possibilities. The first theory is that Google's promotion of its own internal sites might prevent a producer of a rival product from access to an input critical to competing. Kayak's and Expedia's allegations exemplify such concerns; these firms claim that Google will manipulate its search result to favor its own potential travel products over theirs if permitted to close its proposed acquisition of travel information analysis provider ITA.[100] If Google's search engine is important enough to foreclose competition in these markets—in particular, if it has monopoly power—rivals could be left with only less efficient alternatives to reach consumers. The same logic can be applied to the complaints by vertical search engines, such as SourceTool, that Google discriminates against its search rivals in its paid

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[98] Danny Sullivan, *The New York Times Algorithm & Why It Needs Government Regulation*, SEARCH ENGINE LAND (July 15, 2010, 2:07 PM), http://searchengineland.com/regulating-the-new-york-times-46521.

[99] Riordan & Salop, *supra* note 94, at 556.

[100] Margot Williams, *Expedia is worried about Google/ITA Deal*, INSIDEGOOGLE.COM (July 12, 2010, 12:13 PM), http://insidegoogle.com/2010/07/expedia-is-worried-about-googleita-deal/; *see also* Ashby Jones, *The Google/Antitrust Story Continues With Objections to ITA Purchase*, WALL ST. J. L. BLOG (Oct. 26, 2010, 9:05 AM), http://blogs.wsj.com/law/2010/10/26/the-googleantitrust-story-continues-with-objections-to-ita-purchase/.

advertising rankings.[101] Of course, monopoly power is only a necessary but not a sufficient condition for the creation of incentives to behave anticompetitively; and even if found, any competitive harm would have to be weighed against the competitive benefits described above.

Moreover, a number of market mechanisms constrain any attempt by Google or other search engines to harm competition through malign search bias. As discussed above, consumers' ready ability to satisfy revealed preferences through selecting less-preferred search links necessarily constrains search engine exclusionary practices. This constraint is most likely to be important when, as in the above examples, the consumers' preferred link is still ranked.[102]

A number of other considerations mitigate a search engine's incentives to bias search results and thereby to harm competition rather than to compete in more effective ways that benefit consumers. First, with respect to product search, Google does not sell retail goods, and does not profit directly from its own product search offerings (which compete with frequent complainant, Foundem), instead benefiting by increasing its customer base and the efficacy of paid advertisements on its search pages that include links to its own price comparison results. It is thus a tenuous claim, at best, that Google profits more by degrading its search results than by improving them.

Second, if the contrary claim is really true—that is, if Google harms itself or its advertisers by intentionally penalizing competing sites like Foundem—then any evidence of such harm is absent from the current debate. And, of course, if Google is actually improving its product by applying qualitative decisions to demote sites like Foundem and others that, Google claims, merely re-publish information from elsewhere on the web with precious little

[101] Diane Bartz, *Sourcetool Says Google Violated U.S. Antitrust Laws*, REUTERS (Feb. 17, 2009, 6:01 PM), http://www.reuters.com/article/2009/02/17/google-sourcetool-antitrust-idINN1738748920090217?rpc=44.

[102] Of course, this ameliorative effect could abate if a search engine delisted a webpage altogether.

original content, then Google's efforts should be seen as a feature and not a bug.

A balanced view of the potential competitive benefits and harms from vertical integration suggests that while vertical integration is generally efficient and benefits consumers, it may also lead to competitive harm under some conditions. From a policy perspective, the issue is whether some sort of ex ante blanket prohibition of or restriction upon vertical integration is appropriate instead of an ex post, fact-intensive evaluation on a case-by-case basis, such as under antitrust law. The right answer will depend in part upon how likely one believes that vertical integration is to lead to competitive harm. Economic analysis can provide some useful answers here.

Vertical integration is ubiquitous in a modern economy. Economists generally agree that incumbent retailers alone benefit from legal restrictions upon vertical integration, with consumer welfare losses typically resulting. Well-known examples in the United States are state laws that restrain vertical integration by manufacturers that protect, among others, beer distributors, automobile dealers, and gas station owners.[103] These restrictions upon vertical integration have

[103] *See* Cooper et al., *supra* note 74; Lafontaine & Slade, *supra* note 97, at 676 (finding "clear evidence that restrictions on vertical integration that are imposed, often by local authorities, on owners of retail networks are usually detrimental to consumers"); Margaret E. Slade, *Beer and the Tie: Did Divestiture of Brewer-Owned Public Houses Lead to Higher Beer Prices?*, 108 ECON. J. 565, 600 (1998); Michael G. Vita, *Regulatory Restrictions on Vertical Integration and Control: The Competitive Impact of Gasoline Divorcement Policies*, 18 J. REG. ECON. 217 (2000) (prohibitions on vertical integration in the gasoline industry increased prices); *see also* Asher A. Blass & Dennis W. Carlton, *The Choice of Organizational Form in Gasoline Retailing and the Cost of Laws that Limit that Choice*, 44 J.L. & ECON. 511, 521 (2001) (estimating that a hypothetical national divorcement law would cost consumers between $0.6 and $2.1 billion). In the gasoline industry in particular, the Federal Trade Commission has advised state governments to abandon restrictions on vertical integration on precisely these grounds. *See, e.g.*, Letter from Maureen K. Ohlhausen, Dir., Office of Policy Planning, Michael A. Salinger, Dir., Bureau of Econ., & Jeffrey Schmidt, Dir., Bureau of Competition, FTC, to Councilmember Mary M. Cheh 6 (June 8, 2007), *available at* http://www.ftc.gov/os/

raised prices and harmed consumers rather than benefiting them.

Francine Lafontaine and Margaret Slade, in a recent and leading survey of the economic literature, present the following description of the current state of the evidence:

> [O]verall a fairly clear empirical picture emerges. The data appear to be telling us that efficiency considerations overwhelm anticompetitive motives in most contexts. . . . It says that, under most circumstances, profit maximizing vertical-integration decisions are efficient, not just from the firms' but also from the consumers' points of view. Although there are isolated studies that contradict this claim, the vast majority support it. Moreover, even in industries that are highly concentrated so that horizontal considerations assume substantial importance, the net effect of vertical integration appears to be positive in many instances. We therefore conclude that, faced with a vertical arrangement, the burden of evidence should be placed on competition authorities to demonstrate that that arrangement is harmful before the practice is attacked. Furthermore, we have found clear evidence that restrictions on vertical integration that are imposed, often by local authorities, on owners of retail networks are usually detrimental to consumers. Given the weight of the evidence, it behooves government agencies to reconsider the validity of such restrictions.[104]

As a prophylactic regulatory measure against consumer harms caused by search engine bias, both economic theory and empirical evidence suggest that a search neutrality rule—defined as an a priori restriction against search engine vertical integration or bias in favor of its own products—is

2007/06/V070011divorcement.pdf ("Repealing the Act's divorcement provision and allowing suppliers to operate retail gasoline stations likely would lead to lower operation costs for some stations, which would benefit consumers in the form of lower prices.").

[104] LaFontaine & Slade, *supra* note 97, at 677; *see also* Joskow, *supra* note 74.

not justified. Any individual instances of anticompetitive search engine bias are properly dealt with under antitrust laws. The next section briefly sketches the appropriate antitrust framework for evaluating search engine bias.

C. Antitrust Framework for Evaluating Monopolization Claims Involving Search Engine Bias[105]

Section 2 of the Sherman Act ("Section 2") forbids any person to "monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations."[106] It is well established that the offense of monopolization requires demonstration of both "(1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident."[107] Courts and antitrust scholars struggle to assign administrable content to the language of Section 2.[108] This ambiguity spurs an ongoing scholarly debate over the possibility and desirability of constructing a unified monopolization test to apply to all varieties of business conduct falling within the scope of the statute.[109]

The key challenge facing any proposed analytical framework for evaluating monopolization claims is distinguishing pro-competitive from anticompetitive conduct. Antitrust errors are inevitable because much of what is potentially actionable conduct under the antitrust laws frequently actually benefits consumers, and generalist judges

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[105] This discussion is based, in part, on the authors' analysis in Manne & Wright, *supra* note 35.

[106] Sherman Antitrust Act, 15 U.S.C. § 2 (2006).

[107] United States v. Grinnell Corp., 384 U.S. 563, 570–71 (1965).

[108] U.S. DEP'T OF JUSTICE, COMPETITION AND MONOPOLY: SINGLE FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT (2008), *available at* http://www.usdoj.gov/atr/public/reports/236681.htm.

[109] *See, e.g.*, Thomas E. Kauper, *Section Two of the Sherman Act: The Search for Standards*, 93 GEO. L.J. 1623, 1624 (2005).

are called upon to identify anticompetitive conduct with imperfect information. As Judge Easterbrook has noted, the optimal antitrust rules minimize the costs of these errors by establishing and allocating appropriate burdens of proof.[110] Given the tendency in antitrust to condemn business practices that are not well understood, or for which an efficiency explanation cannot be proffered that fits into the categories of cognizable efficiencies established by earlier cases, it is key that any burden-shifting approach to monopolization retains the requirement that plaintiffs demonstrate that actual consumer harm has occurred.[111]

Despite the vigorous debate over the appropriate legal standards to apply in specific Section 2 cases, a sensible and common starting place for discussion of modern monopolization analysis is the D.C. Circuit's opinion in *United States v. Microsoft Corp.*[112] In the monopolization context, *Microsoft* sets forth the leading burden-shifting approach for distinguishing exclusionary from competitive acts.[113] The plaintiff's initial burden is described as follows:

> [T]o be condemned as exclusionary, a monopolist's act must have an 'anticompetitive effect.' That is, it must harm the competitive *process* and thereby harm consumers. . . . [Further], the plaintiff, on whom the burden of proof of course rests, must demonstrate that the monopolist's conduct indeed has the requisite anticompetitive effect.[114]

Next, "if a plaintiff successfully establishes a prima facie case under § 2 by demonstrating anticompetitive effect, then the monopolist may proffer a [non-pretextual] 'pro-competitive justification' for its conduct."[115] Finally, "if the

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[110] *See* Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 13 (1984).

[111] *See* Benjamin Klein, *Exclusive Dealing as Competition "On the Merits"*, 12 GEO. MASON L. REV. 119, 119 (2003).

[112] United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001) (en banc) (per curiam).

[113] *Id.* at 58.

[114] *Id.* at 58–59.

[115] *Id.* at 59.

monopolist's pro-competitive justification stands unrebutted, then the plaintiff must demonstrate that the anticompetitive harm of the conduct outweighs the pro-competitive benefit."[116]

The key economic function of the plaintiff's burden to demonstrate actual competitive harm at the onset of litigation is to minimize the social costs of antitrust enforcement, and, in particular, the costs associated with false positives. The D.C. Circuit noted the difficulty of this task:

> Whether any particular act of a monopolist is exclusionary, rather than merely a form of vigorous competition, can be difficult to discern: the means of illicit exclusion, like the means of legitimate competition, are myriad. The challenge for an antitrust court lies in stating a general rule for distinguishing between exclusionary acts, which reduce social welfare, and competitive acts, which increase it.[117]

With this challenge in mind, courts have long struggled to develop administrable tests that, at a minimum, identify implausible claims.[118] These screens, such as the "monopoly power" requirement,[119] filter out non-meritorious claims where the complained-of conduct is incapable of harming the competitive process and where a finding of liability would be especially likely to chill pro-competitive business practices. Similarly, the requirement that plaintiffs satisfy their prima facie burden with evidence of anticompetitive effect serves the purposes of reducing the administrative costs of litigating non-meritorious claims and of minimizing the social costs of errors.

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[116] *Id.*

[117] *Id.* at 58.

[118] *See, e.g.*, *id.* at 69 ("Because an exclusive deal affecting a small fraction of a market clearly cannot have the requisite harmful effect upon competition, the requirement of a significant degree of substantial foreclosure serves a useful screening function.").

[119] *See supra* note 107.

Yet of late, disagreement over precisely how to define competitive harm has threatened to reintroduce these costs. Antitrust law has staunchly held that consumer welfare is the proper metric for determining antitrust harm.[120] However, advocates of a "consumer choice" standard are attempting to alter the competitive harm dialogue by asserting that any reduction in the number of options available to consumers—even when accompanied by price reductions or output increases—constitutes a cognizable antitrust harm, essentially implying that only the maximum number of options is optimal for consumers.[121] Such a definition portends not only a complete break from well-established antitrust precedent, but also the imposition of significant consumer welfare losses, as the consumer choice standard is likely to err systematically in predicting actual competitive effects due to its failure to account for relevant factors such as vertical efficiency, pricing efficiency, output effects, and competition for distribution. Moreover, consumer choice claims are generally devoid of quantification and rigor, implying "some" reduction in consumer value from a reduction in brand choices, but not distinguishing between those reductions with reference to actual market conditions, nor, as noted, comparing them to corresponding price and quality benefits.

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[120] *See, e.g.*, Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) (describing the Sherman Antitrust Act as a general "consumer welfare prescription").

[121] Neil W. Averitt & Robert H. Lande, *Using the "Consumer Choice" Approach to Antitrust Law*, 74 ANTITRUST L.J. 175, 182 (2007) (asserting that antitrust harm is properly defined as activities "that unreasonably restrict[] the totality of price and nonprice choices that would otherwise have been available"); *see also* Robert H. Lande, *Consumer Choice as the Ultimate Goal of Antitrust*, 62 U. PITT. L. REV. 503 (2001); Eric K. Clemons & Nehal Madhani, *The Need to Focus on the Correct Issues in Google, Power, and Antitrust*, HUFFINGTON POST (Apr. 19, 2011, 1:48 PM), http://www.huffingtonpost.com/eric-k-clemons/the-need-to-focus-on-the-_b_851102.html ("Free or subsidized offerings can appear to offer additional choice, but they often kill competition, harming the competitive process. This inevitably reduces consumer choice, which often reduces the new player's incentive to innovative [sic] and allows the new player to charge substantially higher prices.").

With the general monopolization landscape and first principles in hand to provide the lens for any specific application of Section 2 law, this Article turns now to a more detailed discussion of the two key elements of a potential monopolization case—monopoly power and exclusionary conduct—and their application to Google and search bias.

1. Monopoly Power

Monopoly power is the first element of the monopolization offense and refers to the "power to control prices or exclude competition."[122] As an antitrust concept, monopoly power must be distinguished from the type of economic market power that refers merely to the ability to have some discretion over one's own price without losing all sales. Although market power in this sense is ubiquitous in the modern economy, monopoly power of the type required to establish a Section 2 violation implies the power to control either market prices or output.[123] Further, this power must be durable rather than transitory.[124]

Applied to a theoretical monopolization case against Google, a monopoly power inquiry raises several complex issues. The most important of these is that the market definition inquiry plays a central role in disciplining any monopoly power analysis. Thus, in assessing a claim of a Section 2 violation, careful consideration of the potentially relevant markets in which anticompetitive conduct might have occurred is necessary.

With respect to a monopolization claim involving Google's search engine bias, the relevant allegation involves Google's possession of durable monopoly power in the "search engine market." Conventionally, those arguing that Google

[122] United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 391 (1956).

[123] United States v. Microsoft Corp., 253 F.3d 34, 51 (D.C. Cir. 2001) (en banc) (per curiam).

[124] *Id.*

possesses such power point to aggregate data indicating that Google has a large share in such a market.[125]

Like all antitrust questions involving market definition, defining the relevant market in which Google competes is a potentially thorny issue. Most casual discussions of Google's market share reference its share of the *search* market. Although the size of Google's search market is relevant to assessing its significance in the search advertising market, the two are not the same. Thus, claims that "Google has 70% of the U.S. search market" may be true,[126] but are not clearly dispositive of the question of whether Google has monopoly power in the advertising market, where this figure is merely a measure of the number of searches performed on the major general search engines by end users in the United States. Inferring monopoly power from such aggregate shares is not uncommon in antitrust analysis, and Google's claimed market shares are certainly not out of line with the shares that have given rise to these presumptions—assuming the denominator is correct.[127] For the sake of illustrating the relevant antitrust framework, this Article assumes that Google has monopoly power for the remainder of the analysis.

However, before conducting this analysis, it is important to note that monopolization allegations often

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[125] *See, e.g.*, Tim Wu, *In the Grip of the New Monopolists*, WALL ST. J., Nov. 13, 2010, *available at* http://online.wsj.com/article/SB10001424052748704635704575604993311538482.html.

[126] Stephen Shankland, *Google's U.S. Search Share Nears 70 Percent*, CNET NEWS (July 15, 2008, 12:53 PM), http://news.cnet.com/8301-1023_3-9991866-93.html; *see also* Edelman & Lockwood, *supra* note 18; *Search Engine Market Share*, NETMARKETSHARE.COM (Feb. 2011), http://www.netmarketshare.com/search-engine-market-share.aspx?qprid=4; *Google's Market Share in Your Country*, GOOGLE OPERATING SYSTEM, http://googlesystem.blogspot.com/2009/03/googles-market-share-in-your-country.html (last visited Mar. 5, 2012).

[127] *See, e.g.*, Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 481 (1992) (finding 80% to 95% predominant); United States v. Grinnell Corp., 384 U.S. 563, 571 (1966) (finding 87% predominant); *E.I. du Pont Numours & Co.*, 351 U.S. at 379 (finding 75% predominant); Am. Tobacco Co. v. United States., 328 U.S. 781 (1946) (finding over 66% predominant); United States v. Dentsply Int'l Inc., 399 F.3d 181, 188 (3d Cir. 2005) (finding 75% to 80% predominant).

obscure the potential for efficiencies arising from vertical integration. These efficiencies are a crucial component of the antitrust analysis of search engine behavior and benefits, yet they are also often overlooked and misunderstood by neutrality proponents. The essential point of the vertical integration analysis is that these arrangements can, and often do, yield significant pro-competitive efficiencies—and that these efficiencies are not a function of monopoly power, but rather of efficient—even innovative—forms of business organization. Neutrality proponents, however, often fail to account properly for such monumental increases in consumer welfare. FairSearch, for example, completely distracts itself from a proper examination of the competitive effects of vertical integration by focusing not upon the actual effects to consumers, but rather solely upon Google's alleged market power.[128] While relevant, this issue fails to reach the core of the vertical integration analysis, and, accordingly, improperly skews the cost-benefit analysis.

2. Does Antitrust Impose upon Google a Duty to Deal to "Undo" Search Bias in Ad Results?

On its advertising platform, Google allegedly employs its quality score—which rivals complain it has kept secret—to preclude access by competitors to its top ad results and to increase the payments required of competitors for top placement.[129] In an effort to match the facts of *Aspen Skiing*, a successful antitrust action, the *TradeComet* complaint also alleges that Google withdrew from a voluntary, profitable venture through manipulation of its quality scores.[130] The

[128] FAIRSEARCH, CAN SEARCH DISCRIMINATION BY A MONOPOLIST VIOLATE U.S. ANTITRUST LAWS? 1–2 (July 12, 2011), *available at* http://www.fairsearch.org/wp-content/uploads/2011/07/Can-Search-Discrimination-by-a-Monopolist-Violate-U.S.-Antitrust-Laws1.pdf.

[129] *See* Daniel Lyons, *They Might Be a Little Evil,* NEWSWEEK, June 1, 2009, at 24; Joe Nocera, *Stuck in Google's Doghouse,* N.Y. TIMES, Sept. 13, 2008, at C1.

[130] *Compare* Complaint ¶ 8, TradeComet.com LLC v. Google, Inc., 693 F. Supp. 2d 370 (S.D.N.Y. 2010) (No. 09 Civ. 1400), *with* Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 601 (1985).

relevant question is whether the antitrust laws impose upon Google a duty to deal with its rivals by making concessions in either ad rankings, search rankings, or otherwise.

The antitrust laws only rarely impose a duty to deal upon business firms.[131] In *Trinko,* the Supreme Court reaffirmed that as a general matter, the antitrust laws do not prescribe a duty to deal with rivals.[132] However, the Supreme Court also identified narrow conditions "at the boundary" of Section 2 law under which antitrust law will impose such a duty.[133]

In *Aspen Skiing*, the Supreme Court held that a ski area operator violated the antitrust laws by refusing to continue a joint-ticket venture with a neighboring operator.[134] Under the initial agreement, the parties issued joint, multiday lift tickets that could be used at each of the areas' ski facilities.[135] In finding that there was sufficient evidence to support antitrust liability, the Court focused upon the offending operator's willingness to terminate a voluntary and profitable business relationship.[136] The Court observed that the offending operator persisted in terminating the joint-ticket venture even after the competitor offered to pay full retail price for the tickets in order to continue the arrangement.[137] Relying upon these facts, the Court concluded that such conduct suggested that the offending ski operator was willing to forgo short-term

[131] *See, e.g.*, United States v. Colgate & Co., 250 U.S. 300, 307 (1919) (noting that antitrust laws typically do not "restrict the long recognized right of [a] trader or manufacturer engaged in an entirely private business, freely to exercise his own independent discretion as to parties with whom he will deal"). The right to refuse to deal with rivals is not absolute, however, but it is close. *See Aspen Skiing*, 472 U.S. at 601 ("[T]he high value . . . placed on the right to refuse to deal with other firms does not mean that the right is unqualified."); Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP (*Trinko*), 540 U.S. 398, 407 (2004).

[132] *Trinko*, 540 U.S. at 408.

[133] *Id.* at 409.

[134] *Aspen Skiing*, 472 U.S. at 608.

[135] *Id.* at 589–90.

[136] *Id.* at 610–11.

[137] *Id.* at 594.

profits for future monopoly prices.[138] As a result, the court determined that the refusal to deal was anticompetitive conduct aimed at preserving a monopoly.[139]

The Supreme Court's latest decision on the duty to deal limits the doctrine to an extremely narrow set of circumstances:

> Firms may acquire monopoly power by establishing an infrastructure that renders them uniquely suited to serve their customers. Compelling such firms to share the source of their advantage is in some tension with the underlying purpose of antitrust law, since it may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities. . . . Moreover, compelling negotiation between competitors may facilitate the supreme evil of antitrust: collusion. Thus, as a general matter, the Sherman Act "does not restrict the long recognized right of [a] trader or manufacturer engaged in an entirely private business, freely to exercise his own independent discretion as to parties with whom he will deal."[140]

The Court warned that the imposition of a duty to deal would threaten to "lessen the incentive for the monopolist, the rival, or both to invest in . . . economically beneficial facilities."[141] Commentators have heavily criticized "refusal to deal" jurisprudence,[142] not least because the principles offer business firms little in the way of advance knowledge regarding whether business decisions violate the antitrust laws. Because imposition of a duty to deal with rivals threatens to decrease the incentive to innovate by creating

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[138] *Id.* at 610–11.

[139] *Id.*

[140] *Trinko*, 540 U.S. 398, 407–08 (2004) (citing United States v. Colgate & Co., 250 U.S. 300, 307 (1919)).

[141] *Id.* at 408.

[142] *See, e.g.*, Ronald A. Cass & Keith N. Hylton, *Preserving Competition: Economic Analysis, Legal Standards and Microsoft*, 8 GEO. MASON L. REV. 1, 27 (1999); Frank H. Easterbrook, *On Identifying Exclusionary Conduct*, 61 NOTRE DAME L. REV. 972, 973 (1986).

new methods of producing goods at lower costs, satisfying consumer demand, or creating new markets altogether, courts and antitrust agencies have been reluctant to expand the duty.

Despite this reluctance, the TradeComet complaint contends that Google's decision to implement a quality metric that effectively terminates earlier dealings with competitors more closely resembles the circumstances presented in Aspen Skiing than those in Trinko, and thus purports to present the rare circumstance warranting imposition of a duty to deal under Section 2.[143] The key allegation is that Google manipulates the quality score generated by its quality score methodology, allowing Google to adjust where among the sponsored links AdWords[144] will place an advertisement and what amount must be bid to secure a top placement.[145] According to TradeComet, this allows Google arbitrarily to charge advertisers higher prices for the same placement irrespective of the advertiser's keyword auction bids.[146] The complaint contemplates that in extreme cases, Google could charge arbitrarily high prices sufficient to result in a de facto refusal to deal with rivals.[147] TradeComet alleges that Google employed this type of strategy once its vertical search engine rival, SourceTool, started to enjoy success in the search advertising market.[148]

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[143] Complaint ¶ 8, TradeComet.com LLC v. Google, Inc., 693 F. Supp. 2d 370 (S.D.N.Y. 2010) (No. 09 Civ. 1400).

[144] Google auctions keywords through its AdWords platform. These auctions determine the amount Google charges advertisers for placement within sponsored links. HOWIE JACOBSON, ADWORDS FOR DUMMIES 1–3 (2d ed. 2009).

[145] Complaint ¶ 33, *TradeComet.com*, 693 F. Supp. 2d 370.

[146] *Id.* ¶¶ 33–34.

[147] *Id.* ¶ 78.

[148] The authors have analyzed this claim of Google's search engine as a so-called "essential facility" elsewhere. *See* Geoffrey A. Manne, *The Problem of Search Engines as Essential Facilities: An Economic and Legal Assessment*, *in* THE NEXT DIGITAL DECADE 419, 419–34 (Berin Szoka & Adam Marcus eds., 2010). It is also worth noting that the Supreme Court has refused to endorse such a claim, *see Trinko*, 540 U.S. 398, 410 (2004), and that, because of this refusal, there is near universal agreement from

Google's use of its own quality scores does not, however, create an antitrust duty to deal. TradeComet precariously justifies its claim by alleging that Google and TradeComet once entered into a voluntary and profitable deal.[149] TradeComet further alleges that changes to the terms of that deal, such as an increase in the price charged, imply the type of short-term sacrifice of profits at work in *Aspen Skiing*.[150] However, the reasons for rejecting antitrust-based duties to deal cited by the Court in *Trinko* and advanced by leading commentators all militate in favor of rejecting such an allegation.[151]

The most critical of these reasons in the search engine bias context is that, as discussed above, the likelihood of competitive harm is low relative to the likelihood of consumer benefits. Nearly as important is that imposing a duty to deal is not likely to improve matters because of the difficulties of crafting and enforcing a remedy. As the Court noted in *Trinko*, "enforced sharing . . . requires antitrust courts to act as central planners, identifying the proper price, quantity, and other terms of dealing—a role for which they are ill suited."[152] The Antitrust Modernization Commission recently reached a similar conclusion,[153] joining the growing consensus of commentators, such as Judge

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commentators that the doctrine should be abandoned. *See, e.g.*, 3A PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 771c (3d ed. 2008) ("[T]he essential facility doctrine is both harmful and unnecessary and should be abandoned."); Michael Boudin, *Antitrust Doctrine and the Sway of Metaphor*, 75 GEO. L.J. 395, 402 (1986) (noting the "embarrassing weakness" of the essential facilities doctrine).

[149] Complaint ¶ 8, *TradeComet.com*, 693 F. Supp. 2d 370.

[150] *Id.*

[151] The authors discuss this point in greater detail in Manne & Wright, *supra* note 35.

[152] *Trinko*, 540 U.S. at 408.

[153] ANTITRUST MODERNIZATION COMM'N, REPORT AND RECOMMENDATION 102 (2007), *available at* http://govinfo.library.unt.edu/amc/report_recommendation/amc_final_report.pdf ("[F]orced sharing requires courts to determine the price at which such sharing must take place, thereby transforming antitrust courts into price regulators, a role for which they are ill suited.").

Posner, who have concluded that "it cannot be sound antitrust law that, when Congress refuses or omits to regulate some aspect of a natural monopolist's behavior, the antitrust court will step in and, by decree, supply the missing regulatory regime."[154]

It should also be noted that the attempt to extend the duty to deal to Google's quality score metric is unprecedented in the sense that it is an attempt to use the antitrust laws to mandate that Google provide its rivals with access to an innovative and effective algorithm for efficient pricing. That every general-purpose search engine uses the device for the same purpose[155] further suggests that its function is pro-competitive. Complaints about the secrecy of the algorithm are a "red herring" from an antitrust perspective. No business firm, even a monopolist, has an antitrust duty to reveal to competitors the formulas that it uses to set prices. Further, there is an obvious pro-competitive justification for keeping the quality score metric secret: Google's success in matching keywords to ads will be compromised by disclosure of the algorithm because it would open opportunities to game the auction process. U.S. antitrust law not only does not condemn Google's ability to charge efficient prices for its services through the auction, it encourages it.

3. Unintended Consequences of Regulating Search Bias in Organic Results

While neither economic theory nor evidence justify the a priori regulation of search bias on consumer welfare grounds, search neutrality remedies can impose further costs upon consumers above and beyond depriving consumers of the benefits associated with bias. The most important of the unintended consequences of search neutrality is that by

[154] RICHARD A. POSNER, ANTITRUST LAW 243–44 (2d ed. 2001).

[155] For example, Yahoo! also has a Quality Index that measures the relevance of advertisements and affects both the price advertisers must bid and the position in which their ads appear. *Frequently Asked Questions*, YAHOO! HELP, http://help.yahoo.com/l/us/yahoo/ysm/sps/faqs_all/faqs.html#what_qi (last visited Mar. 5, 2012).

making search engine results uniform, competitors would no longer have an incentive to differentiate themselves from one another upon margins that consumers value. As discussed above, evidence suggests that not only Google, but its rivals, as well, find it efficient to promote and make prominent certain types of information for its users. Like competition in most industries, Google and, for example, Yahoo!, vary in precisely how they differentiate themselves. That differentiation is a form of competition. Search neutrality, in its attempt to achieve greater uniformity across search engines, reduces the incentive to engage in that form of competition. As one Google executive has observed:

> [T]he strongest arguments against rules for "neutral search" is [sic] that they would make the ranking of results on each search engine similar, creating a strong disincentive for each company to find new, innovative ways to seek out the best answers on an increasingly complex web. What if a better answer for your search, say, on the World Cup or "jaguar" were to appear on the web tomorrow? Also, what if a new technology were to be developed as powerful as PageRank that transforms the way search engines work? Neutrality forcing standardized results removes the potential for innovation and turns search into a commodity.[156]

Meanwhile, it is difficult to see how relevance (and thus efficiency) could be well served by a neutrality principle that requires a tool that *reduces* search costs to inherently *increase* those costs by, for example, directing searchers to a duplicate search on another site. If one is searching for a specific product and hoping to find price comparisons on Google, it is most efficient for that person to find Google's own efforts at price comparison, built right into its search

[156] Marissa Mayer, *Do Not Neutralise the Web's Endless Search*, FIN. TIMES, July 14, 2010, *available at* http://googlepublicpolicy.blogspot.com/2010/07/our-op-ed-regulating-what-is-best-in.html.

engine, rather than a link to another site that requires another several steps before finding the information.[157]

The same analysis holds for assessments of Google's other offerings (maps and videos, for example) that compete with other sites. Look for the nearest McDonald's in Google and a Google Map is bound to top the list. And there is no reason it should be any other way. In effect, what Google does is to give users search results in as accessible and appropriate a form as it can—design decisions that, Google must believe, increase quality and reduce effective price for its users. By offering a link not only to McDonalds' website, but also to a map showing the locations of the nearest restaurants, Google is offering up results in different forms and hoping that one will satisfy the user's preferences. In this setting, there is no economic justification for requiring a search engine to offer another site's rather than its own simply because there happen to be other sites that do, indeed, offer such content (and would like cheaper access to consumers). Meanwhile, the implication that this requirement exists essentially because Google has not always offered results in this form (it is now "leveraging its dominance into ancillary markets" rather than "offering the same product it always has, only in a more advanced format") is an affront to the dynamism and innovation of high-tech markets.

Of course, proponents of search neutrality have anticipated that neither theory nor evidence support the proposition that such regulation would make consumers better off on consumer welfare margins: price, quantity, quality, or innovation. As such, they have turned to arguments that search neutrality might provide other social or cultural benefits. This Article now turns to those claims.

[157] Seen this way, Google's decision to promote its own price comparison results is a simple product pricing and design decision, protected by good sense and the *Trinko* decision (at least in the United States).

V. THE MYTH OF SEARCH NEUTRALITY'S NON-ECONOMIC VIRTUES

In addition to economic concerns surrounding Internet search behavior, some commentators have voiced unease about certain presumed non-economic consequences of search engine bias. These commentators have called for "scholars and activists to move beyond the crabbed vocabulary of competition law to develop a richer normative critique of search engine dominance."[158] The limits of the economic approach embodied in competition law may prove less constraining than these critics realize. After all, modern antitrust analysis focuses upon consumer welfare, which in turn encompasses price, output, quality, and innovation.[159] While search bias regulation may seek to promote values other than consumer welfare through search neutrality or otherwise, the costs to consumers outlined in Part III suggest that any regulatory regime must, at a minimum, demonstrate that the non-economic benefits it creates exceed these tangible consumer losses.[160]

The shift by search neutrality advocates from economic analysis to a non-economic critique of search bias is rooted primarily in amorphous "democracy" concerns:

> Though rarely thought of as a "mass medium," search engines occupy a critical junction in our networked society. Their influence on our culture, economy, and politics may eventually dwarf that of broadcast networks, radio stations, and newspapers. 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

[158] Pasquale, *supra* note 11, at 402.

[159] *See, e.g.*, Douglas H. Ginsburg, *Judge Bork, Consumer Welfare, and Antitrust Law*, 31 HARV. J.L. & PUB. POL'Y 449 (2008).

[160] *See, e.g.*, Christopher Yoo, *Beyond Network Neutrality*, 19 HARV. J.L. & TECH. 1, 54 (2005) ("There is noting [sic] incoherent about imposing regulation to promote values other than economic welfare. . . . [But] such a theory must provide a basis for quantifying the noneconomic benefits and for determining when those benefits justify the economic costs.").

> opportunities for abuse, along with concerns over its limitation to legitimate and appropriate uses.[161]

Pasquale sets out the fundamental, underlying issue when he writes:

> Dominant search engines and carriers are the critical infrastructure for contemporary culture and politics. As these dominant intermediaries have gained more information about their users, they have shrouded their own business practices in secrecy. Internet policy needs to address the resulting asymmetry of knowledge and power.[162]

The key elements of the non-economic argument against search engines are: (1) information asymmetry, an indeterminate threat to culture and politics (sometimes rendered as "democracy"); (2) the absence of transparency; and (3) the need for some intervention, typically labeled a "policy," to correct these abuses. As another commentator concludes, "[c]learly, we should not trust Google to be the custodian of our most precious cultural and scientific resources."[163]

The fundamental problem with these non-economic claims, as well as with the larger class of techno-skepticism to which they belong, is that the arguments do not adequately distinguish between problems of private and of government control over these scarce resources. It is one thing to identify possible problems with the status quo; it is another to prove that any particular solution—or even any solution at all—is preferable to those problems.[164] In the

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[161] Bracha & Pasquale, *supra* note 3, at 1150–51; *see also* Pasquale, *supra* note 11.

[162] Frank Pasquale, *Dilemmas of Domination: Google Faces the Search Neutrality Movement*, BALKINIZATION (Dec. 28, 2009), http://balkin.blogspot.com/2009/12/dilemmas-of-domination-google-faces.html.

[163] SIVA VAIDHYANATHAN, THE GOOGLIZATION OF EVERYTHING 202 (2011).

[164] Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 12 J. L. & ECON. 1, 1–3 (1969) ("The view that now pervades much public policy economics implicitly presents the relevant choice as between an ideal norm and an existing 'imperfect' institutional arrangement. This

case of search engine regulation, the arguments that Google is imperfect are not matched with arguments that government solutions to resolve these imperfections are any better.

Thus, as others have noted, at some level the concept of neutrality in search is a contradiction. Search engines are by definition discriminatory—and valuably so:

> Of course Google differentiates among sites—that's why we use it. Systematically favoring certain types of content over others isn't a defect for a search engine—it's the *point* . . . . A search engine cannot possibly treat all websites equally, not without turning into the phone book.[165]

Moreover, there is going to be information asymmetry, even with maximum transparency, for the simple reason that search is a technological process. Even if given unfettered access to Google's most essential trade secrets, most people could no more understand the implications of its specific terms than we could understand the workings of a human brain by staring at it.

This inevitability reveals a critical aspect of calls for search neutrality on these non-economic grounds. The real leveling suggested by these commentators is not a leveling of information between *firms* and their *consumers*; rather the leveling is between firms and *governments*, who might possess and deploy the requisite engineering knowledge to ferret out some meaning from the search engine's mathematical formulae. However, this reshuffling of deck chairs does not necessarily effect a reallocation of information or power between consumers and sellers, unless consumers are perfectly represented by the government.

Experience and common sense suggest this is not the case—and the necessity of discrimination built into the search engine's essence means that such a reshuffling would

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nirvana approach differs considerably from a *comparative institution* approach in which the relevant choice is between alternative real institutional arrangements.").

[165] Grimmelmann, *supra* note 3, at 442–43.

only shuttle control of the specifics of this discrimination to a different, imperfect decider. Governments have repeatedly proven themselves far greater threats to the very core non-economic concerns to which they are presumed to be the solution. No private entity in the world possesses power through the legitimate use of force matched by its government, and, as a result, no private entity equally threatens culture, freedom, and the like. While democratic governments rarely intend to violate these ideals, they wield immense power and are susceptible to influence from rent-seeking entities interested in co-opting that power to their own ends.[166] Thus, even while claiming that the government is the essential bulwark against the depredations of Google's presumed power, these commentators readily and ironically identify the government as complicit in Google's abuse of power: "Through its remarkable cultural power, Google has managed to keep much regulatory action at bay around the world. In fact, Google seems poised to try to mold regulations in its favor in several important areas."[167] It is unclear why the same government that facilitates the current set of claimed abuses will be effective in mitigating future instances of abuse.

One of the most significant ironies of this position is that it effectively champions the interests of one specific corporation (Microsoft) against another (Google), rather than upholding abstract principles of democracy against an imagined capitalist threat more generally. This fact is central to understanding the consequences of imposing a

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[166] JAMES M. BUCHANAN & GORDON TULLOCK, THE CALCULUS OF CONSENT (1962); ROBERT D. TOLLISON, THE ECONOMIC ANALYSIS OF RENT SEEKING (1995); George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. & MGMT. SCI. 3 (1971); *see also* Jonathan R. Macey, *Promoting Public-Regarding Legislation Through Statutory Interpretation: An Interest Group Model*, 86 COLUM. L. REV. 223, 224 (1986) ("[M]arket forces provide strong incentives for politicians to enact laws that serve private rather than public interests, and hence statutes are supplied by lawmakers to the political groups or coalitions that outbid competing groups.").

[167] VAIDHYANATHAN, *supra* note 163, at 48.

regulatory solution on the claimed problems of Google's role in search:

> Given the long history in antitrust of abuse of the private action to impose costs on rivals engaging in efficient business practices—a piece of history that is central to any narrative of the history of modern antitrust—and the longstanding concern about this idea in the economics literature, the argument that identity of the plaintiff or interloper is irrelevant to the economic merits of the underlying claim in the Microsoft-Google context seems especially wrongheaded.[168]

It is hard to imagine that our precious cultural resources are better protected by furthering Microsoft's interests in harming Google rather than Google's interest in avoiding its rivals' efforts to harm it. Similarly, prioritizing the interests of those websites that claim to be harmed by Google's manipulation of its search engine in the name of abstract principle is likely to lead to undesirable consequences:

> Giving websites search-neutrality rights gives them a powerful weapon in their wars with each other—one that need not be wielded with users' interests in mind. Search neutrality will be born with one foot already in the grave of regulatory capture.[169]

As scholars have noted, the claims about the cultural implications of search discrimination are modeled on similar claims about network discrimination in the network neutrality debate.[170] The root concern is that, absent leveling

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[168] Joshua Wright, *The Microsoft-Google Antitrust Wars and Public Choice: There Is Too An Argument Against Rival Involvement in Antitrust Enforcement*, TRUTH ON THE MARKET, http://truthonthemarket.com/2010/09/14/the-microsoft-google-antitrust-wars-and-public-choice-there-is-too-an-argument-against-rival-involvement-in-antitrust-enforcement/ (last visited Mar. 5, 2012).

[169] Grimmelmann, *supra* note 3, at 459.

[170] *See* Jerry Kang, *Race.Net Neutrality*, 6 J. TELECOMM. & HIGH TECH. L. 1 (2007); Marvin Ammori, *Net Neutrality and the 21st Century First Amendment*, BALKINIZATION (Dec. 10, 2009), http://balkin.blogspot.com/2009/12/net-neutrality-and-21st-century-first.html; Mathew Ingram,

legislation or regulation, avaricious corporations with the means to allocate scarce resources for profit will do so—to the detriment of the citizenry's "neutral" and unfettered access to the culture-defining information on the Internet. But as in the case of network neutrality, there is simply no evidence that this pernicious outcome has been realized. Even where there are claims that Google has intentionally harmed its competitors through specific manipulation of its search results, there is no evidence that this manipulation, even assuming it were happening, implies the catastrophic threat to democracy that proponents of that view claim.

Others claim that even without resorting to specific manipulation, Google presents a danger to our culture and politics simply by virtue of its fundamental profit-making goal:

> The imperatives of a company that relies on fostering Web use and encouraging Web commerce for its revenue may understandably morph into a system that privileges consumption over exploration, shopping over learning, and distracting over disturbing. That, if nothing else, is a reason to worry.[171]

For this author, these concerns lead to a "call for more explicitly public governance of the Internet."[172] This argument remains one-sided. More broadly, this sort of argument presupposes a set of values that the author purports "should" be fostered by the Internet and, by extension, by Google. The attempt to codify these values into law merely represents the preferencing of one set of outcomes over another by fiat. Ironically, Google's profit motive is itself an important protector of the aggregate preferences of its users because its success relies upon consumer satisfaction. Even if Google's incentives at the

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Google Fights Growing Battle Over "Search Neutrality", GIGAOM (Dec. 17, 2010, 8:30 AM), http://gigaom.com/2010/12/17/google-antitrust-search-neutrality/.

[171] VAIDHYANATHAN, *supra* note 163, at 12.

[172] *Id.* at 11.

margin sometimes run against those preferences, this conflict is at least tempered by the general importance to Google and its advertisers of maintaining the attention of its users. Once governance decisions are outsourced, any responsiveness to users' preferences is only more attenuated, and it is hard to see how that promotes rather than threatens democratic values.

Finally, it is difficult to see how the *actual* complained-of abuses—those raised in the various litigations and regulatory investigations against Google—can result in the consequences these commentators claim. It is difficult to discern the threat to democracy that arises when Foundem shows up tenth instead of third in the search results for the query "Nikon camera," or how the demise of MapQuest and the concomitant elevation of Google Maps portend the end of our culture as we know it. And it is similarly unclear in what way the sanctity of information is protected if a court substitutes KinderStart's view of its rightful place in Google's search results for Google's own. These purported non-economic threats to our welfare from Google's activities seem dramatically overstated even on their own terms.

VI. THE INTRACTIBLE PROBLEM OF FASHIONING A REMEDY (ASSUMING THERE IS ANYTHING TO REMEDY)

Even in the best of antitrust cases, fashioning an appropriate remedy is a challenge—considerations such as effectiveness and proper scope abound. As former Assistant Attorney General for Antitrust Thomas Barnett has put it:

> Even in circumstances where competitive harm theoretically could occur, the difficulty of designing a proper remedy may reveal that antitrust litigation cannot effectively remedy that harm. Since the Sherman Act's enactment in 1890, certain kinds of conduct appearing to harm competition have proven

> themselves beyond the limits of effective antitrust control.[173]

Despite the serious analytical shortcomings in the various theories of social harm deriving from search bias, search neutrality proponents have proffered myriad options for the regulation of search engines and the placement of their results. These proposed remedies all suffer from the same basic and fundamental flaws: either they are substantively defective, because the theoretical benefits claimed by proponents would not arise as a result of the remedy or would perversely injure consumers (and are noncognizable in antitrust analysis); or they are practically defective, as problems such as regulatory capture, rent-seeking, and error costs would dwarf any potentially positive value. In many cases, the proposed remedies suffer from several—or even all—of these flaws. This Article's focus upon proposed remedies is essential both because a viable and effective remedy is a necessary predicate for sensible regulation generally and because, as Tom Barnett notes in the quote above, in antitrust the evaluation of remedies may illuminate the true competitive effects of the underlying conduct.[174]

Given the well-known dynamic and innovative nature of Internet search, neutrality proponents call for "responsive, flexible regulation, rather than rigid mandates that would actually crowd out or impede innovation."[175] They concede that "the institutional arrangements will have to be nuanced

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[173] Thomas O. Barnett, Assistant Attorney Gen., Antitrust Div. U.S. Dep't of Justice, Presentation at the American Bar Association Conference on Monopolization Remedies: Section 2 Remedies: What to Do after Catching the Tiger by the Tail (June 4, 2008), *available at* http://www.justice.gov/atr/public/speeches/233884.htm.

[174] *Id.* ("Furthermore, contemplation of the remedy may reveal that there is no competitive harm in the first place. Judge Posner has noted that '[t]he nature of the remedy sought in an antitrust case is often . . . an important clue to the soundness of the antitrust claim.'").

[175] Frank Pasquale, *Asterisk Revisited: Debating a Right of Reply on Search Results*, 3 J. BUS. & TECH. L. 61, 65 (2008) [hereinafter Pasquale, *Asterisk Revisited*].

and somewhat complex," yet argue that "[i]t does not follow . . . that doing nothing is the preferable option."[176] The authors concur with the somewhat trivial claim that the mere fact that a remedy is expensive does not per se mean it should not be implemented; the harm that the remedy solves may very well exceed the costs that the remedy imposes. However, serious analysis of both the costs imposed by and the benefits attained from various remedial options is necessary before any option can be implemented with a serious possibility of improving matters rather than operating to the detriment of competition and innovation in search.

While ambitious neutrality proponents have suggested numerous methods by which to alleviate bias, the next section focuses upon four of the most prominent: (1) a "federal search commission"; (2) a "browser choice screen"; (3) computer reservation system-style restrictions on ranking factors; and (4) disclosure and transparency mandates. This Article now turns to an examination of the options proposed by search bias advocates, focusing on the associated costs and benefits of each option.

A. Overview of Proposed Regulations

1. Similarities between the Remedies

At a general level, the proposed remedies exhibit several unifying similarities. For example, and to put it bluntly, the proposed search neutrality remedies consistently (1) disadvantage Google; (2) advantage its rivals; and (3) have little if anything to do with consumers. By depriving Google of efficiencies it could realize from vertical integration and by imposing costly modifications, oversight, and compliance costs, the remedies all place Google at a competitive disadvantage. Moreover, the proposed remedies exacerbate this disadvantage by creating regulatory schemes that accrue to the benefit of Google's competitors, such as by

[176] Bracha & Pasquale, *supra* note 3, at 1209.

mandating that they be included in Google's results. Additionally, each of these remedies—sometimes knowingly—substitutes away from consumer welfare for the furtherance of an alternative, often elusive, and always ill-defined, objective.

Search neutrality supporters gloss over the invasive nature of their proposed schemes, generally proffering favorable comparisons to other, allegedly successful, regulatory regimes as the exclusive evidence in support of their favored remedies. While analysis by analogy is often helpful, on its own (as here), it fails to take account of subtle but important market realities that render the analogized examples inapplicable. In fact, a closer evaluation of the proffered comparisons makes clear that these "analogous" regulatory regimes do not have much in common with proposed schemes to regulate Google's core business conduct, nor were these benchmark remedies particularly successful even when measured on their own terms.

2. Some First Principles of Evaluating Regulatory Regimes

Before any remedy is implemented, several concerns must be analyzed. At the forefront of a comprehensive analysis are error and administrative costs and potential efficiency losses. Public choice theory supplements these initial concerns with equally important questions concerning the decisions regulators themselves make in administering their respective regimes and the potential social costs these decisions entail. A proper analysis of these concerns reveals whether the benefits of the remedy exceed its total costs, including allocative, productive, and dynamic efficiency losses, as well as the enforcement costs the remedy entails.[177] However, the inquiry does not end once this first question is answered, for any remedy must not only be beneficial on a net basis, but should further provide benefits in excess of those that would result from other viable options.

[177] Howard A. Shelanski & J. Gregory Sidak, *Antitrust Divestiture in Network Industries*, 68 U. CHI. L. REV. 1, 17 (2001).

As Judge Easterbrook has noted, the objective of remedies in antitrust is to minimize the sum of error and administrative costs.[178] Antitrust error costs include both the costs of wrongfully condemning pro-competitive behavior (Type I errors) and the costs of allowing anticompetitive behavior to continue (Type II errors).[179] In the antitrust context, Type I errors are remarkably more expensive than Type II errors because anticompetitive conduct that is erroneously allowed to continue will necessarily experience some level of self-correction, as supra-competitive prices and profits incentivize competitors to enter an industry. Meanwhile, Type I errors not only (mistakenly) impose treble damages upon the beneficial behavior in which the individual firm engaged, but also deter other firms from adopting similar competitive strategies.[180]

Dynamic efficiency concerns constitute a separate category. Conduct remedies exacerbate the potential for loss arising from diminished competition and innovation. In the search engine market, with its continuous and significant technological developments,[181] such reductions in competition are incredibly costly for consumers and for economic growth.[182] Even search neutrality proponents show some concern with the potential for remedies to dampen innovation, acknowledging that the economy may evolve too rapidly for cumbersome antitrust remedies, imposed only at the conclusion of extensive litigation, to be effective.[183]

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[178] Easterbrook, *supra* note 110, at 16.

[179] *Id.*

[180] *Id.* at 15.

[181] Gasser, *supra* note 3, at 126–31 (documenting the history of search engines and discussing significant developments and innovations).

[182] *See* Yan Chen, Grace YoungJoo Jeon, & Yong-Mi Kim, A Day without a Search Engine: An Experimental Study of Online and Offline Search (Nov. 15, 2010) (unpublished manuscript), *available at* http://yanchen.people.si.umich.edu/papers/VOS_20101115.pdf.

[183] *See, e.g.*, Jonathan Zittrain, *The Un-Microsoft Un-Remedy: Law Can Prevent the Problem That It Can't Patch Later*, 31 CONN. L. REV. 1361, 1362 (1999) ("The main concern in finding a remedy for these behaviors may be time: the technology environment moves at a lightning pace, and by the time a federal case has been made out of a problem, the problem is

Indeed, antitrust law is unlikely to provide the remedy that search neutrality proponents seek—but this is, in our view, a feature rather than a bug. The consumer welfare analysis embedded into antitrust is deeply concerned with the pernicious nature of Type I errors, and with the vexing difficulty of distinguishing pro-consumer behavior from conduct that is likely to reduce competition and injure consumers.[184] Recent Supreme Court jurisprudence evidences the Court's acute awareness that antitrust laws should be applied with caution, avoiding situations in which their application is prone to "unusually serious mistakes."[185] The Court repeatedly has not only required the demonstration of competitive harm, but has also adamantly refused to apply invasive and cumbersome remedies, acknowledging their potential for perversely impacting consumer welfare.[186]

Completing the error cost analysis requires adding administrative costs to the regulatory calculus. Enforcement and compliance costs are "enormously" important aspects of administrative costs, and include both the uncertainty associated with terms or conditions in the final judgment as well as the strategic litigation that inherently arises from such ambiguities.[187] No less important are the costs imposed by the regulators themselves, who suffer from a number of systematic decision-making biases.[188] Among other things, regulators (1) may be especially risk averse, leading them to intervene in an inefficiently high number of situations; (2) are subject to regulatory capture; and (3) create incentives

proven, a remedy fashioned, and appeals exhausted, the damage may already be irreversible.").

[184] Easterbrook, *supra* note 110, at 16–17.

[185] Credit Suisse Sec. (USA) LLC v. Billing, 551 U.S. 264, 265 (2007).

[186] *See, e.g.*, *Trinko*, 540 U.S. 398, 413–15 (2004); Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 223 (1993).

[187] Shelanski & Sidak, *supra* note 177, at 32.

[188] James C. Cooper & William E. Kovacic, *Behavioral Economics: Implications for Regulatory Behavior* (Working Paper, July 21, 2011), *available at* http://ssrn.com/abstract=1892078; *see also* Stephen J. Choi & A.C. Pritchard, *Behavioral Economics and the SEC*, 56 STAN. L. REV. 1 (2003).

for rent-seeking behavior.[189] Moreover, they often suffer from "tunnel vision," in that they focus narrowly upon their own agencies' objectives, often to the exclusion of larger considerations, thereby increasing the number of unintended consequences resulting from regulation.[190] This effect may be especially pronounced in the search engine debate, given the dialogue currently dominating the discussion. Because nearly all proponents of search engine regulation erroneously equate "bias" with harm to consumers, regulators may be narrowly focused upon addressing issues of controlling bias, while the goal of protecting consumer welfare is obscured.

With these general principles in hand, this Article turns now to discussing several prominent proposed remedies for so-called search bias.

B. Assessing the Proposed Remedies

1. Federal Search Commission

Perhaps the most extreme remedy advanced by neutrality proponents is "direct" regulation of search engines—executed by a new regulatory "Federal Search Commission"—to achieve a long-term, comprehensive elimination of search bias.[191]

There are several weaknesses with this approach. The first flaw, most likely a fatal one, is that the remedial focus is upon *eliminating bias* rather than *maximizing consumer welfare*. This weakness is especially glaring in light of the fact that its most prominent proponents, Bracha and Pasquale, make the welfare-based claim that such regulation

[189] *See* DENNIS C. MUELLER, PUBLIC CHOICE III (2003); Sam Peltzman, *An Evaluation of Consumer Protection Legislation: The 1962 Drug Amendments*, 81 J. POL. ECON. 1049 (1973).

[190] STEPHEN BREYER, BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION 10–19 (1993).

[191] *See, e.g.*, Bracha & Pasquale, *supra* note 3, at 1206–07.

would increase efficiency.[192] This argument is addressed below.

Proponents of such direct regulation attempt to bolster their claims by analogizing their proposed remedies to other "successful" regulatory regimes. The analogies are not quite so clear-cut—indeed, it is not even obvious that they provide evidence in favor of a new regulatory agency for search results rather than against it. Pasquale, for example, notes that cap-and-trade environmental regulations effectively induced corporations to control their pollution outputs. He further asserts that this scheme successfully reduced occurrences of acid rain without being overly burdensome to businesses, as it regulated only the ultimate output of pollution and not the method of compliance.[193] However, like most search neutrality advocates' analogies, the comparison he invites is superficial and misleading in the search context. Acid rain has concrete and easily discernable causes, namely sulfur dioxide and nitrogen oxides; accordingly, decreasing the level of acid rain is a clear end goal with a simple (as in the opposite of complex, not necessarily as in the opposite of difficult) method of achievement.[194] Decreasing search bias, on the other hand, would be a far more convoluted endeavor, as problems of identifying bias in the first instance plague much of the inquiry, to say nothing of the great difficulty in discerning its cause and whether the bias is good or bad from a consumer welfare perspective. Moreover, even this appealing analogy demonstrates that administrative costs are inherent in this style of regulation and further suggests

[192] *Id.* at 1173–75.

[193] *See* Clean Air Act, Title IV, 42 U.S.C. §§ 7651–7651o (2008); Pasquale, *supra* note 175, at 64; *see also* Sam Napolitano et al., *The U.S. Acid Rain Program: Key Insights from the Design, Operation, and Assessment of a Cap-and-Trade Program*, 20 ELECTRICITY J. 47, 51 (2007) ("Because EPA does not review the compliance strategies, there is no uncertainty about regulatory approval.").

[194] NAT'L ACID PRECIPITATION ASSESSMENT PROGRAM, REPORT TO CONGRESS: AN INTEGRATED ASSESSMENT 1 (2005).

that applying such rules to search engines is simply infeasible.[195]

As noted above, search neutrality proponents often rely upon the essential facilities doctrine as a basis for their claims.[196] Bracha and Pasquale lead this charge, arguing that search engines exhibit crucial attributes of natural monopolies.[197] These assertions, however, presuppose that we know what a search engine "monopoly" would look like. To properly characterize this market as a natural monopoly would require an analysis of search engine market shares. Rather than engaging in this essential discussion, Bracha and Pasquale proffer that search engines experience substantial economies of scale, arising from the high fixed costs and comparatively low marginal costs of operation, and thus that barriers to entry are significant.[198] Yet their claims that barriers to entry are nearly insurmountable and economies of scale enormous have never been corroborated.[199]

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[195] Even in the acid rain context, where harm is demonstrable, crafting regulations that properly align firms' costs with social benefits, so as to maximize welfare, is an exceedingly difficult task for even the most enthusiastic of social planners. *See, e.g.*, Byron Swift, *How Environmental Laws Work: An Analysis of the Utility Sector's Response to Regulation of Nitrogen Oxides and Sulfur Dioxide Under the Clean Air Act*, 14 TUL. ENVTL. L.J. 309, 377 (2001). Indeed, evidence demonstrates that administrative and compliance costs were quite significant. One study found that, on average, firms' nitrogen oxide emissions were 11% below the average legal limit, and that this over-compliance derived in part from the regulatory uncertainty caused by delays in the promulgation of the rules, subsequent amendments to the rules, and litigation over the rules. *Id.* at 365. Furthermore, the European Union's recent attempt to apply cap-and-trade rules to the more complex global warming problem "has been a bureaucratic morass with a host of unexpected and costly side effects and a much smaller effect on carbon emissions than planned." Steven Mufson, *Europe's Problems Color U.S. Plans to Curb Carbon Gases*, WASH. POST, Apr. 9, 2007, *available at* http://www.washingtonpost.com/wp-dyn/content/article/2007/04/08/AR2007040800758.html; *see also* Swift, *supra*, at 377.

[196] *See supra* Part II.

[197] Bracha & Pasquale, *supra* note 3, at 1180–82.

[198] *Id.* at 1180–81.

[199] Manne & Wright, *supra* note 35 (noting that none of the papers claiming network effects in online search attempt to support the claim,

Indeed, the evidence suggests that the market is large enough to support more than one search engine quite comfortably.[200]

Bracha and Pasquale further contend that the essential facilities doctrine may be applied to search engines, with some modifications.[201] For the reasons discussed above, these arguments fail. The Supreme Court has never recognized essential facilities as a legitimate theory upon which to rest an antitrust case, and, in this context, the Court has clearly conceived of antitrust law as a substitute for a general regulatory regime rather than a reason for the existence of such a regime.[202]

The problem that arises in employing the essential facilities doctrine, or related doctrines invoking common carrier status for natural monopolies, is that the typical remedy is to mandate access. Many neutrality advocates have addressed this "access," and what it means in the context of search results, with several suggesting forced rankings, placements, or inclusion. For example, Pasquale controversially argues that in the case of inclusion harm—that is, harm arising from an undesired high-ranking result—the appropriate response is to provide a legal right to the inclusion of an asterisk following the search result's hyperlink, where the asterisk would direct users to the

and finding instead that the relevant network effects are internalized and accordingly do not create insurmountable barriers to entry).

[200] *See, e.g.*, JONATHAN E. NUECHTERLEIN & PHILIP J. WEISER, DIGITAL CROSSROADS: AMERICAN TELECOMMUNICATIONS POLICY IN THE INTERNET AGE (2007); Moffat, *supra* note 2, at 494; *see also, e.g.*, Nicholas Kolakowski, *Bing, Google Battle Lines Remain Unchanged: comScore*, EWEEK.COM, http://www.eweek.com/c/a/Search-Engines/Bing-Google-BattleLines-Remain-Unchanged-comScore-479519/ (last visited Mar. 5, 2012) (noting that one recent estimate puts Yahoo! and Bing's combined share of the U.S. online search market at 30%).

[201] *See* Pasquale, *supra* note 11, at 402 ("It is now time for scholars and activists to move beyond the crabbed vocabulary of competition law to develop a richer normative critique of search engine dominance.").

[202] *Trinko*, 540 U.S. 398, 410–11 (2004).

complainant's explanation of, or response to, the hyperlink.[203] Another author creatively argues that search engines should be required to maintain a certain percentage of results on a given page for randomly ranked results (i.e. those not derived from the engine's algorithm) in order to reduce present "bias" against new websites.[204]

These proposals are problematic, radical, and quite appropriately shunned; mandating access is a drastic and disfavored regulatory action, and one specifically frowned upon in antitrust law.[205] In the first place, discerning when, where, and how much access is to be ceded are all arduous and complex endeavors. Moreover, such regimes require continued agency or court involvement. This prolonged involvement is incredibly problematic, as regulators may suffer from more severe biases—and certainly from severely diminished competency as compared to search engines themselves—in determining the appropriate inclusion and ranking of search results.[206] Indeed, courts have repeatedly

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[203] *See* James Grimmelmann, *Don't Censor Search,* 117 YALE L.J. 48, 51 (Supp. 2007) (critiquing the asterisk remedy); Frank Pasquale, *Rankings, Reductionism, Responsibility*, 54 CLEV. ST. L. REV. 115, 117 (2006) (initially proposing this remedy); Pasquale, *Asterisk Revisited*, *supra* note 175 (responding to criticisms of the remedy).

[204] Sandeep Pandey et al., *Shuffling a Stacked Deck: The Case for Partially Randomized Ranking of Search Engine Results*, PROC. OF 31ST INT'L CONF. ON VERY LARGE DATABASES (VLDB) (2005), *available at* http://oak.cs.ucla.edu/~cho/papers/cho-shuffle.pdf. This approach and its rationale are particularly problematic. A restriction upon differentiation as a competitive virtue of search engines, along with forced inclusion of others' rankings, are unlikely to create greater competition and commit the economically fatal flaw of evaluating remedies with a "websites rather than consumers first" disposition.

[205] *Trinko*, 540 U.S. at 407–08.

[206] Eric Goldman, *Search Engine Bias and the Demise of Search Engine Utopianism*, 8 YALE J.L. & TECH. 188, 197 (2008) ("[R]egulatory intervention that promotes some search results over others does not ensure that searchers will find the promoted search results useful. Instead, government regulation rarely can do better than market forces at delivering results that searchers find relevant, so searchers likely will find some of the promoted results irrelevant."); Grimmelmann, *supra* note 11, at 23 ("There is a strong counterargument, however, that regulators would

declined to intervene in the day-to-day operations of businesses far more mundane than search, noting that they have no comparative expertise there; they grant firms wide discretion to engage in business conduct.[207] In the antitrust context in particular, the Supreme Court has noted that:

> Effective remediation of violations of regulatory sharing requirements will ordinarily require continuing supervision of a highly detailed decree. We think that Professor Areeda got it exactly right: "No court should impose a duty to deal that it cannot explain or adequately and reasonably supervise. The problem should be deemed irremedia[ble] by antitrust law when compulsory access requires the court to assume the day-to-day controls characteristic of a regulatory agency."[208]

The Court thus recognizes that firms are engrossed in the everyday operations and decisions that need to be made within a given market, which lends them a serious comparative advantage over courts in assessing the intricacies of the market dynamic—especially when that market is characterized by high levels of competition and innovation. Accordingly, there is no guarantee that court intervention would make consumers better off, but rather a high likelihood of decreasing consumer welfare.

Furthermore, any regulatory scheme would likely suffer from serious relevancy and adaptability problems. Internet search is incredibly dynamic and innovative; vigorous competition between search engines forces them to be constantly searching for yet unrealized value. Thus, one author describes "ideal regulation" as "adaptable to unpredictable changes in technology, as well as changes in business methods [and] consumer behavior"—an admirable,

be even more biased, as well as grossly incompetent, at the task of dictating search results.").

[207] *See, e.g.*, *Trinko*, 540 U.S. at 414–15; Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 223 (1993) (noting that some conduct is "beyond the practical ability of a judicial tribunal to control without courting intolerable risks of chilling legitimate price-cutting").

[208] *Trinko*, 540 U.S. at 414–15.

yet entirely unachievable, goal.[209] Regulators generally have a difficult enough time monitoring the status quo, never mind coping with unforeseen and sudden alterations in market conditions.

The complexity of regulating web search is often understated by its proponents. Edelman, for example, acknowledges that "web search considers myriad web sites" and numerous "attributes of each web page," yet goes on to claim that "these differences only grant a search engine more room to innovate."[210] However, he fails to take this finding to its logical conclusion in the context of his call for greater regulation of search results: the difficulty of reasonably remedying purported search bias increases exponentially with the number of methods by which search engines can compete. Given that the particular regulations Edelman is referencing inhibited innovation and vitiated nearly all of the value originally associated with underlying conduct—which Edelman concedes was markedly easier to regulate than is that of search engines[211]—any regulatory regime would face a serious uphill battle in proving beneficial rather than harmful to social welfare.

Finally, it is important to recall that mandating results would create a more homogenous product across competing search engines, and that the benefits this homogenization would accrue to the larger, more well established search engines, as smaller search engines have fewer methods by which to compete customers away.[212] Correspondingly, such governmentally mandated uniformity would reduce innovation and even consumer choice—the very problem many neutrality proponents identify and purport to solve with their proffered remedies.[213]

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[209] Moffat, *supra* note 2, at 500.

[210] Ben Edelman, *Remedies for Search Bias* (Feb. 22, 2011), http://www.benedelman.org/news/022211-1.html. Edelman makes these remarks in regards to airlines' computer reservation systems, discussed *infra* Part VI.B.3.

[211] *Id.*

[212] *See supra* Part IV.C.3.

[213] *See id.*

2. Browser Choice Screen

While search neutrality proponents often publicly question Google's claim that competition is just "one click away," many propose a remedy that follows this model.[214] Edelman turns to the European Commission's antitrust litigation against Microsoft as a guide, arguing that it is "squarely on point," and focusing upon the "browser choice screen" that Microsoft agreed to include on any operating system that had Internet Explorer as the default browser.[215]

The browser choice screen displays horizontally the twelve most popular browsers; the top five options are immediately visible to users with seven others available if the user scrolls left.[216] Users are prompted to choose one of these as their default.[217] Edelman contends not only that the remedy translates well to the search context, but also that it is a model of success.[218] As explained below, neither of these claims stands up to further analysis because (1) the theory of harm in the Microsoft browser case was tenuous at best; (2) more importantly for present purposes, the evidence shows that the browser choice screen was unsuccessful in achieving its purported goal of altering the browsers' market shares; and (3) when applied to the search engine context, such an option would create an environment ripe for rent-seeking by Google's competitors, who would eagerly vie for inclusion, without adding any value to the market.[219]

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[214] Edelman, *supra* note 210.

[215] Case COMP/C-3/39.530 – Microsoft (tying), Commission Decision Relating to a Proceeding under Article 102 of the Treaty on the Functioning of the European Union and Article 54 of the EEA Agreement 16 (Dec. 16, 2009), *available at* http://ec.europa.eu/competition/antitrust/cases/dec_docs/39530/39530_2671_3.pdf [hereinafter Microsoft Commission Decision].

[216] *Id.* annex at 1–5.

[217] *Id.*

[218] Edelman, *supra* note 210.

[219] Barnett, *supra* note 173, at 14 ("Access remedies also raise efficiency and innovation concerns. By forcing a firm to share the benefits of its investments and relieving its rivals of the incentive to develop

a. Theory of Harm in the E.C. Microsoft Browser Litigation

The Microsoft choice screen case followed on the heels of the main Microsoft case in the European Union, *Microsoft v. Commission*, in which the court found that Microsoft engaged in anticompetitive practices and violated Article 82 (now Article 102) of the European Economic Area Agreement by tying its Windows operating system to its Windows Media Player.[220] Opera Software, a browser developer and competitor of Internet Explorer, initiated this successive investigation in December 2007 with allegations that Microsoft's practice of including only Internet Explorer, and no other browsers, in its Windows operating system constituted unlawful tying.[221] Relying upon a foreclosure theory of harm, Opera Software argued that this practice precluded other browsers from competing on the merits with Internet Explorer.[222] The Commission preliminarily agreed with Opera, finding that the switching costs, including researching, choosing, and installing an alternative browser, likely prevented users, who evidenced a significant lack of understanding of browser dynamics, from moving to alternate browsers.[223] Eager to avoid further protracted litigation, Microsoft quickly agreed to design and install a "browser choice screen" in any computer that had Internet Explorer as its default browser.

Before turning to an analysis of the effects of the browser choice screen on its own terms, it is important to note that

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comparable assets of their own, access remedies can reduce the competitive vitality of an industry.").

[220] Case COMP/C-3/37.792 Microsoft, Commission Decision (Mar. 24, 2004), *available at* http://ec.europa.eu/competition/antitrust/cases/ decision s/37792/en.pdf. The European Court of First Instance issued its final judgment in *Microsoft v. Commission* on September 17, 2007, and Opera Software filed its complaint on December 13, 2007. Jeremy Robinson, *The Microsoft Browser Case: Why the Commission's Decision Fails to Convince*, 4 J. EUR. COMPETITION L. & PRAC. 317, 317–18 (2010).

[221] Robinson, *supra* note 220, at 318.

[222] *Id.*

[223] Microsoft Commission Decision, *supra* note 215, at 10–13.

scholars have heavily criticized the Commission's actions in accepting the Microsoft agreement in the first place, finding that its analysis was more form- than effects-based, and that any harm to users was likely small or even nonexistent.[224] The theory was never proven or litigated, however, because of Microsoft's acquiescence. As discussed below, that the remedy failed completely to have its desired effect further suggests that the theory of harm was incorrect.

b. The (Non)Effects of the Browser Choice Screen Remedy

While Edelman's glowing review of the browser choice solution and its applicability to search results implies otherwise, the evidence demonstrates that this invasive remedy had little, if any, effect upon the browser market and shares of competing browsers. Microsoft introduced the browser choice screen in March 2010.[225] While Internet Explorer's market share in Europe fell in subsequent months, it is apparent that this decrease was not attributable to the imposition of the remedy. As discussed below, the evidence shows that (1) Internet Explorer's market share decreased in an almost identical pattern worldwide over this period; (2) this decrease is due almost entirely to the contemporaneous introduction of Google's Chrome browser;[226] and (3) no other browsers' market shares altered in any meaningful way.

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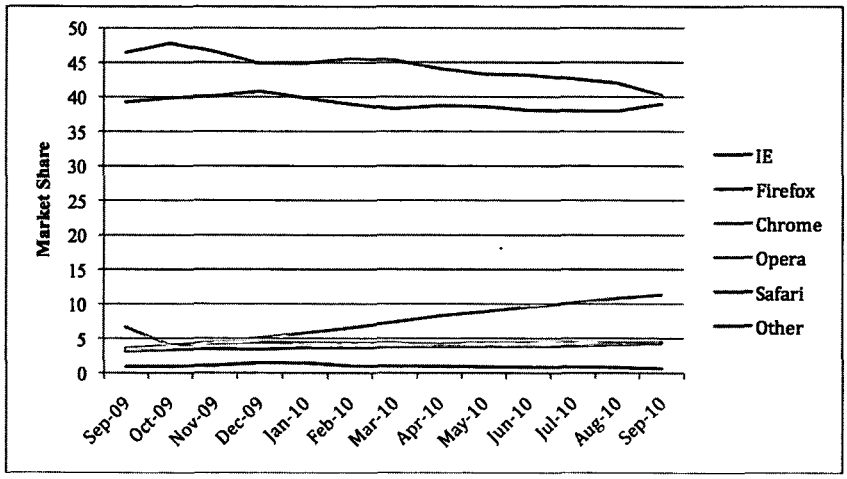
[224] *See, e.g.*, Nicholas Economides & Ioannis Lianos, *A Critical Appraisal of Remedies in the E.U. Microsoft Cases*, 2010 COLUM. BUS. L. REV. 346, 388–91 (2010) (finding that harm to consumers would be "very limited," due to the fact that new browsers can be installed within a few minutes and to the nearly complete compatibility between browsers); Robinson, *supra* note 220, at 318–19.

[225] Robinson, *supra* note 220, at 318–19.

[226] Chrome's success is quite likely due to its superiority. *See, e.g.*, Sarah Perez, *What's the Fastest Web Browser in the "Real World?" Chrome.*, TECHCRUNCH (Aug. 9, 2011), http://techcrunch.com/2011/08/08/whats-the-fastest-web-browser-in-the-real-world-chrome/ (noting that data collected over a one month period, for over 1.86 billion individual measurements on over 200 websites revealed Chrome to be the fastest browser).

Advocates of the browser choice screen lauded its implementation, asserting that it would have widespread, and, frankly, remarkable, benefits for consumers.[227] However, its introduction precipitated neither a decrease in Internet Explorer's market share nor an increase in any other browsers' market share. Figure 2 shows the market shares of the five largest browsers in Europe for the six months preceding and following browser choice screen implementation.[228] There is no serious change. The market shares for browsers other than Internet Explorer and Chrome experience no more than a few percentage points of movement, and Firefox's and Opera's market shares actually fell over this period.

FIGURE 2: BROWSER MARKET SHARES IN EUROPE SEPTEMBER 2009 – SEPTEMBER 2010

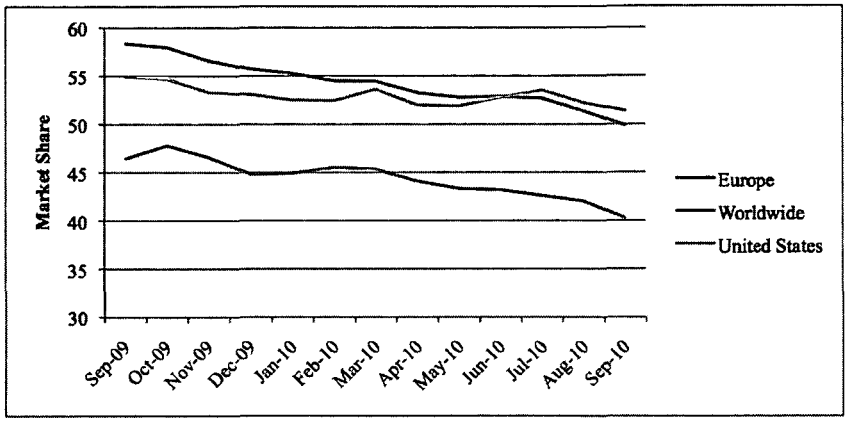


[227] Microsoft Commission Decision, *supra* note 215, at 24; Robinson, *supra* note 220, at 318 (noting that the Commission asserted that "'100 million European users of Windows operating systems . . . and millions more in the future' will benefit").

[228] The data used in these figures is from StatCounter. *StatCounter Global Stats: Top 5 Browsers*, STATCOUNTER, http://gs.statcounter.com/#browser-eu-monthly-200912-201012 (last visited Mar. 5, 2011).

Figure 3 compares Internet Explorer's market share over this same period in Europe, the United States, and worldwide. This comparison allows evaluation of changes in shares in areas covered by the remedy (that is, Europe) against those outside its reach. The changes in Internet Explorer's market share in Europe almost perfectly mirror its changes worldwide, and differ only slightly from changes in its U.S. market share, demonstrating that its declining share of the European market cannot be attributed to the browser choice screen.

FIGURE 3: INTERNET EXPLORER'S MARKET SHARE SEPTEMBER 2009 – SEPTEMBER 2010

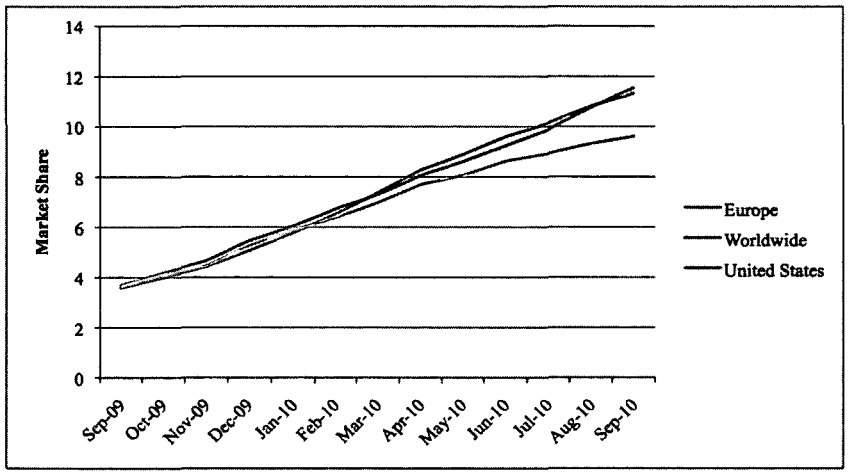


In fact, Internet Explorer's decline in Europe is nearly entirely accounted for by a contemporaneous increase in Chrome's market share. Chrome was just over one year old when the browser choice screen was released, and its usage increased significantly not only in Europe, but also in the United States and across the world in the months following.[229] Here again, the evidence demonstrates that the

[229] Chrome's rapid ascendancy is attributable to its significant benefits and general usefulness, which were recognized even at its initial release. *See, e.g.*, Matt Hickey, *Giving Google Chrome a Spin. This Thing Moves Fast.*, TECHCRUNCH (Sept. 2, 2008), http://techcrunch.com/2008/09/02/givin

browser choice screen was an ineffective tool as measured on its own terms. The pace at which Chrome's market share increased in Europe is virtually indistinguishable from its pace of increase both in the United States and worldwide.

FIGURE 4: CHROME'S MARKET SHARE SEPTEMBER 2009 – SEPTEMBER 2010



c. Translating Lessons from the Browser Choice Remedy to Search Engine Bias

Given the overwhelming evidence of the impotence of the browser choice screen as a solution to perceived market

g-google-chrome-a-spin-this-thing-moves-fast/ ("[Y]ou'll notice just how fast Chrome is immediately. . . . All in all, Google Chrome, after just a little time using it, is superb. It's not only fast, but it's useful. It's not only elegant, but it understands what you really want to do with a browser."); Nick Mediati, *Google Chrome Web Browser*, PCWORLD (Dec. 12, 2008), http://www.pcworld.com/article/150579/google_chrome_web_browser.html ("Google has produced an excellent browser that is friendly enough to handle average browsing activities without complicating the tasks, but at the same time is powerful enough to meet the needs of more-advanced users. The search functionality of the Omnibar is one of many innovations that caught my attention.").

failures,[230] Edelman fails to offer any evidence that it provides a salutary model for regulation of search. Contrary to Edelman's findings, this Article concludes that the theory and evidence underlying the browser choice screen model of regulation suggest that while it could, at best, improve the welfare of individual search engines and websites, it is highly likely to impede competition and to make consumers worse off—and all of this at significant administrative cost. A number of key points are worth emphasizing in rejecting the usefulness of the browser choice analogy for search.

First, the browser choice screen experience clearly shows that even assembling the most popular options, placing them baldly in front of consumers, and telling consumers to choose does not necessarily accomplish anything more than introducing significant costs with little actual impact upon consumer decision making. It is also worth noting that to the extent that actual browser usage shares did not change, this effect is most likely attributable to the fact that competition is vigorous in the browser market and switching costs are low. Indeed, switching costs are even lower in the search context, where users can and do use several different engines and can switch between them in a matter of seconds.[231] The simple explanation for the lack of change in market shares is that consumer preferences drive competition in the browser market, and, absent a qualitative disrupting force (like the introduction of Chrome), the status quo reflects, as nearly as possible, the optimal allocation.

Second, the technical implementation of such a remedy in the search context is much more complicated, and, thus, costly. For instance, Edelman does not address how often search engines would be required to include a choice screen for search engines. In the European Commission *Microsoft* browser case, consumers had to invest in making their own

[230] *See also* Kevin J. O'Brien, *European Antitrust Deal with Microsoft Barely Affects Browser Market*, N.Y. TIMES, Oct. 10, 2010, *available at* http://www.nytimes.com/2010/10/11/technology/11eubrowser.html.

[231] *See supra* note 51.

decision regarding a default option only once,[232] and yet this screen still failed to prompt different consumer choices. Edelman suggests that in the context of search neutrality, this remedy would require search engines to prompt users to "choose a logo" when searching for restaurant reviews, video clips, etc., and suggests that "an unobtrusive drop-down could allow adjustments," and that users could choose providers on a just-in-time basis.[233]

Translating this style of regulatory intervention to the search engine market, however, requires making a number of significantly more costly decisions. For one, it is unclear across how many dimensions this choice screen would need to operate, i.e., whether the search engine would need to create a choice screen for every market in which the search engine offers its own competing product, or whether only those markets in which the search engine had a dominant share would require a choice screen, etc. Moreover, determining how many competitors would be included in the choice screen, how many would be immediately visible, and how many more visible only via scrolling, would be an immensely costly endeavor and would inevitably result in serious rent-seeking by competitors, who would view inclusion as highly valuable.

Finally, even the vertical dropdown box Edelman proposes would need to "rank" its options. Deciding how to do this may result in similar ordering as would a natural search, and, accordingly, have little impact upon the user's experience. In the browser choice case, Microsoft randomized the browser listings in an attempt to avoid this result.[234] Yet systematic randomization of results cannot

[232] Additionally, users may simply choose to close the Choice Screen if they do not want to choose a browser. Press Release, Europa, Antitrust: Commission Decision on Microsoft's New Web Browser Choice Screen–User's Guide (Dec. 16, 2009), *available at* http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/09/559&format=HTML&aged=0&language=EN.

[233] Edelman, *supra* note 210.

[234] Microsoft first proposed to list browsers alphabetically, but decided against this option in response to competitors' concerns that this method

sensibly be a crucial component of an efficient and consumer-welfare serving remedy for alleged search engine bias. The precise function of search engines is to perform this initial screening, i.e., to locate the most valuable option and present it to users. For example, for any given restaurant or video, a different site may offer a better review (Zagat may be better for one, Yelp for another, and so on). If search engines are permitted to utilize their constantly scrutinized ranking mechanisms uninhibited, their organic results will have a much higher likelihood of discerning where this value lies than would a consumer forced to choose a site from a randomized set of results. Similarly, if such systematic errors are introduced, the feedback mechanism upon which search engines partly base their rankings would be compromised, ensuring that search results across the board would be less relevant. Randomizing the display of search results in this way would impose a pure tax upon users. Compounding these potential costs is the fact that a search engine would likely have far less incentive to create its own products if it were allowed to list its product only in a random order along with all other similar products. This diminished incentive to vertically integrate would create losses in consumer welfare, as the efficiencies associated with this behavior would never be realized.[235]

These are important issues of remedial design that pose significant consumer welfare concerns, especially given that consumers would certainly be alienated by search results that require them to make too many of their own decisions

would benefit those browsers listed at the far left or center of the screen. Microsoft Commission Decision, *supra* note 215, at 16.

[235] Barnett, *supra* note 173, at 9 ("Just as importantly, section 2 remedies also should not diminish the innovation incentives of firms competing with a section 2 violator. In *Trinko*, the Supreme Court accurately observed that forced-sharing obligations 'may lessen the incentive' for rivals to invest in 'economically beneficial facilities.' That observation does not merely apply in the refusal-to-deal context–no section 2 remedy should chill the incentives of industry participants to innovate.").

without any guidance.[236] This option, therefore, may merely institutionalize an unnecessarily cumbersome and complicated search process. Even more problematically, proponents of such regulations gloss over antitrust's serious disfavor of remedies that force competitors to share their resources, as these inherently require prolonged court involvement in business decisions for which it has no particular expertise. Accordingly, the choice screen remedy is a dramatic proposal, devoid of evidence demonstrating its efficacy, and likely simply to tax search engine consumers.[237]

3. Customer Reservation Systems and "Display Bias" Restrictions

In the quest to locate a remedy for search bias more feasible than a new federal agency, some have argued that directly regulating the criteria by which search engines may rank results is another desirable option. Indeed, here again Professor Edelman describes how the "successful" regulations governing the airline computer reservation systems ("CRS"), which provided travel agents with flight information prior to the Internet advent, can be equally-effectively applied to search engines.[238] As with browser choice, the analogy is a superficially attractive one, as organizational questions regarding the ordinal rankings of host-owned results inhere in both settings.[239] But as with

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[236] *See, e.g.*, Greg Keizer, *EU's Case against Microsoft Could Burden PC Makers*, PCWORLD (May 28, 2009, 4:19 PM), http://www.pcworld.com/article/165688/eus_case_against_microsoft_could_burden_pc_makers.html ("The result could be anarchy. 'Users don't want a computer that comes with 700 default setting choices.'").

[237] See *infra* Part VI.B.3 (discussing Microsoft's recent study finding that search engine users are taking increasingly more control over their search experiences, and thus that the benefits of regulations aimed at protecting naïve consumers are being continuously dissipated); *see also* Varian, *supra* note 22.

[238] Edelman, *supra* note 210.

[239] As noted above, in order to sort results meaningfully, indexing systems necessarily must choose some metrics for favoring certain results over others. Which metrics are appropriate is a constant source of

browser choice, as discussed below, the lesson to be gleaned from the CRS experience is that imposition of such remedies was, in fact, neither successful nor well conceived from the beginning.[240]

a. A Brief History of "Display Bias" and CRS Regulations

While the CRS regulations encompassed a wide variety of CRS-travel agent interactions, this Article focuses here upon those regulations aimed at preventing "display bias." Early air travel primarily consisted of "interline" flights, which required passengers to fly on more than one airline in order to reach a final destination.[241] CRS were predominantly owned by large airlines and arose to enable them to coordinate trips for their customers across multiple airlines, which necessitated compiling information about rival airlines, their routes, fares, and other price- and quality-relevant information. This combination of economic characteristics naturally drew antitrust advocates' scrutiny.[242] CRS regulation proponents proffered several arguments as to the potentially anticompetitive nature and behavior of CRS-owning airlines.[243]

While numerous, these claims each suffered from serious shortcomings, including both a failure to demonstrate harm to competition rather than merely injury to specific rivals, as well as an insufficient understanding of the value of dynamic efficiency and innovation to consumer welfare. Each of these concerns is pertinent in the CRS context and relevant to the search engine analogy, as CRS arose at a time of incredible change, comparable to the current search engine market. At

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contention in the search engine environment, just as it was in the CRS context.

[240] Cindy R. Alexander & Yoon-Ho Alex Lee, *The Economics of Regulatory Reform: Termination of Airline Computer Reservation System Rules*, 21 YALE J. ON REG. 369 (2004).

[241] FRED L. SMITH, JR., THE CASE FOR REPEALING THE ANTITRUST REGULATIONS 10–11 (1999), *available at* http://cei.org/pdf/3261.pdf.

[242] *Id.*

[243] *Id.* at 10–12.

that time, the recently deregulated airline industry combined with innovative computer technology to create a market that necessitated significant and constant innovation.

One of the most popular anticompetitive theories was that CRS engaged in harmful "display bias," defined as ranking the owner airline's flights above those of all other airlines.[244] In response to these concerns, the Department of Transportation ("DOT") eagerly crafted rules to govern CRS operations in 1984, which focused upon incentivizing entry into the CRS market.[245] One of the most notable rules introduced in the 1984 CRS regulations purported to prohibit display bias.[246] The analogy between "display bias" and what search neutrality regulation proponents term "search bias" has been too tempting for proponents to ignore.

Edelman, for example, asserts that a similar rule could govern search engine rankings by prohibiting Google from ranking results "by any metric that distinctly favors Google."[247] It should be no surprise at this point that this rule is proposed without regard to whether the metric is also consistent with consumer preferences. However, as a factual matter, it is important to note that the DOT did not categorically forbid display bias; rather, it created several exceptions to this rule—and even allowed airlines to

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[244] *Id.* at 12 ("These initial CRS services were used mostly by sophisticated travel agents, who could quickly scroll down to a customer's preferred airline. But this extra 'effort' was considered discriminatory by some at the DOJ and the DOT, and hearings were held to investigate this threat to competition. Great attention was paid to the 'time' required to execute only a few keystrokes, to the 'complexity' of re-designing first screens by computer-proficient travel agents, and to the 'barriers' placed on such practices by the host CRS provider.").

[245] Airline Computer Reservation Systems: Display of Information, 14 C.F.R. §§ 255.1–255.8 (1992) (adopted by 49 Fed. Reg. 32,450 (Civil Aeronautics Bd. Aug. 15, 1984)) (readopted by Computer Reservations System (CRS) Regulations, 57 Fed. Reg. 43,780, 43,800 (Dep't of Transp. Sept. 22, 1992)) (terminated July 31, 2004).

[246] *Id.* § 255.7.

[247] Edelman, *supra* note 210.

disseminate software that introduced bias into displays.248 Additionally, the DOT expressly refused to enforce its anti-bias rules against travel agent displays.249 Of course, such exemptions suggest that rent-seeking was a major factor in shaping the final regulations, and that similar rules as applied in the search engine market would impose significant costs upon search engines such as Google, provide ample benefits to their competitors, and impose a significant tax upon consumers—all without offering any corresponding benefit.

b. Evidence of CRS Failure

The CRS regulatory experiment had several years to prove its worth to consumers; despite the extent and commitment of its regulatory authority, however, these rules failed to improve consumer outcomes in any meaningful way. CRS regulations precipitated neither innovation nor entry, and likely incurred serious allocative efficiency and consumer welfare losses by attempting to prohibit display bias.[250] Unfortunately, it is difficult to characterize the CRS rules as a regulatory success, much less a model for regulating search. This Article reviews the evidence below.

CRS regulations prohibiting bias did not increase consumer welfare. To the contrary, they imposed unjustified costs by ignoring the facts that (1) most travel agents took consumer interests into account in their initial choice of CRS operator (even if they did so to a lesser extent in each individual search they conducted for consumers); and (2)

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[248] Alexander & Lee, *supra* note 240, at 413–14.

[249] *Id.*

[250] CRS regulations unambiguously failed in their goal of increasing ease of entry: not a single new firm entered the market following CRS implementation. In fact, the number of CRSs actually *decreased* after 1984. Alexander & Lee, *supra* note 240, at 401. As such, CRS regulations did not achieve one of their primary objectives—a fact which stands in stark contrast to Edelman's declaration that CRS rules represent an unequivocal regulatory success. Edelman, *supra* note 210.

even if residual bias remained, consumers were "informed" and "repeat players [with] their own preferences."[251]

Each of these points is critically important in analyzing the likely effects of imposing CRS-style regulations upon search engines. First, search engine users are vastly more active in creating and shaping their search experiences than were airline passengers in the 1980s. Indeed, evidence from a recent Microsoft study indicates that Internet searchers are becoming increasingly more active:

> In 2004 people really said that knowledge lives with experts and the experts help them make decisions.
>
> In 2007, people said that search engines actually had all of the knowledge in the world and it was just there for them to go out and pull it out. And now, in 2010, people told us that they created their own knowledge, that even though the search engine never really had all the knowledge in the world, it was linked to information.
>
> People are much more sophisticated now in how they think about that. They say "The search engine's a great tool for getting access to information, but I need to look at that information and contrast and compare it, and come to my own conclusion about what the right answer is for me. . . ." People have a sense that knowledge is something that they are actively creating and that is very personal to them.[252]

Accordingly, any potential value that regulatory interventions could offer is rapidly diminishing over time.

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[251] Alexander & Lee, *supra* note 240, at 417 ("[T]he social value of prohibiting display . . . bias solely to improve the quality of information that consumers receive about travel options appears to be low and may be negative. Travel agents have strong incentives to protect consumers from poor information, through how they customize their internal display screens, and in their choices of CRS vendors.").

[252] Gord Hotchkiss, *Exploring the Shift in Search Behaviors with Microsoft's Jacquelyn Krones*, SEARCH ENGINE LAND (July 15, 2011, 5:23 PM), http://searchengineland.com/exploring-the-shift-in-search-behaviors-with-microsofts-jacquelyn-krones-85750 (quoting Jacquelyn Krones).

As users become more engaged, they become commensurately more capable of adequately understanding the environment and of making welfare-enhancing decisions without regulatory guidance—meaning that contemporary users are increasingly less reliant upon regulatory protection to realize the benefits search engines offer and to avoid the potentially negative effects of allegedly malign search engine bias. These users are adding the value to their search experiences—which search neutrality proponents would attribute to increased regulatory involvement—themselves.

Second, like travel agents, search engines also have "strong incentives" to provide their customers with the most valuable information. Because information about search engines is cheaply available, consumers are well informed, the market is competitive, and switching costs are low, search engines that fail to provide users with optimal results will be forced out of the market—meaning that harmful bias almost by definition cannot persist in equilibrium.[253]

Moreover, consistent with this analysis, and somewhat predictably, CRS regulations appear to have caused serious harm to the competitive process and thus failed to satisfy their objectives.[254] For example, one study found that CRS usage increased travel agents' productivity by an average of 41% and that in the early 1990s over 95% of travel agents used CRS—indicating that travel agents were able to assist consumers far more effectively once CRS became available.[255] CRS regulations, however, severely hampered CRS growth; by imposing strict constraints upon the types and manner of activities in which CRS could engage, these regulations

[253] *See* Manne & Wright, *supra* note 35, at 192–213.

[254] CRS systems initially allowed host airlines to lower the ranks of other large airlines by placing both their own flights and those of smaller competitors above flights for large competitors. When the regulations were imposed and "bias" forbidden, the large airlines each moved higher on their rivals' pages, while the smaller competitors moved lower, thereby decreasing competition in the CRS market. SMITH, *supra* note 241, at 14–15.

[255] Jerome Ellig, *Computer Reservation Systems, Creative Destruction, and Consumer Welfare: Some Unsettled Issues*, 19 TRANSP. L.J. 287, 296–97 (1991).

prevented CRS from effectively competing in a rapidly evolving environment.[256] Given the benefits of CRS, it seems likely that an unconstrained system could have evolved with the changing market dynamics and evolving technologies, and that it would have rewarded additional innovation. Instead, CRS regulations appear to have threatened innovation by decreasing the likelihood that CRS vendors would recover research and development expenditures without providing a commensurate consumer benefit—an unintended consequence that could prove disastrous to the search engine market as well. Search engines are constantly on the brink of being out-competed by others in the market, by new entrants, and by disruptive shifts in consumer preferences (e.g., toward Facebook as a search engine).[257] Removing their ability to recoup upfront technological investments could very well push them over the precipice.

Overall, CRS regulations appear to have counterproductively decreased competition and innovation, thereby harming consumers. As Jerome Ellig notes, "[t]he legal and economic debate over CRS . . . frequently overlooked the peculiar economics of innovation and entrepreneurship."[258] Those who claim that harmful search engine bias both exists and can be meaningfully regulated in a manner that improves outcomes for consumers rely upon this same flawed analysis and expect the same regulatory approach to "fix" the issues they perceive as hurting the search engine market.

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[256] For example, CRS faced increased competition from the Internet, for which it proved no match, given the Internet's unfettered ability to innovate. SMITH, *supra* note 241, at 15–16.

[257] *See* AULETTA, *supra* note 64, at 172–73; Manne & Wright, *supra* note 35, at 191–200; *see also* Farhad Manjoo, *The Great Tech War of 2012*, FAST COMPANY (Oct. 29, 2011), http://www.fastcompany.com/magazine/160/tech-wars-2012-amazon-apple-google-facebook (analyzing the numerous dimensions upon which Google fiercely competes with Facebook, Amazon, and Apple).

[258] Ellig, *supra* note 255, at 306.

4. Disclosure and Transparency Mandates

Search neutrality advocates who focus on the transparency-based, social and cultural issues arising from search results tend to argue for remedies requiring various levels of disclosure.[259] They use economic concepts such as information asymmetry as their basis for determining consumer harm, perceiving threats to culture and politics—indeed, to democracy itself.[260] Relying upon these visions of social harm, they advocate for numerous disclosure regimes, which vary both in the level of disclosure required and as to whom disclosures would be made.

Many argue that search engines should disclose how they operate and the methods by which they rank their results, with some going so far as to "demand full and truthful disclosure of the underlying rules (or algorithms) governing indexing, searching, and prioritizing . . . ."[261] Edelman, for example, argues that search engines should be required to disclose all manual adjustments of organic results to a special master.[262] He focuses upon manual modifications because he sees this option as especially ripe for abuse (although without any evidence of such abuse), arguing that it provides a simple way for Google to penalize those it disfavors.[263] There is, however, no evidence, nor even a claim, that manual manipulation of organic results has resulted in any of the alleged harms described by

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[259] See *supra* Part V for a discussion of specific transparency and cultural issues.

[260] VAIDHYANATHAN, *supra* note 163, at 202; Bracha & Pasquale, *supra* note 3, at 1150–51; Jennifer A. Chandler, *A Right to Reach an Audience: An Approach to Intermediary Bias on the Internet*, 35 HOFSTRA L. REV. 1095 (2007).

[261] Lucas D. Introna & Helen Nissenbaum, *Shaping the Web: Why the Politics of Search Engines Matters*, 16 INFO. SOC'Y 169, 181 (2000); *see also* Chandler, *supra* note 260, at 1115 ("This transparency requirement should include (a) disclosure of the way in which the search engines work and how they rank search results, (b) clear identification of paid links, and (c) notification when information is blocked or removed pursuant to law.").

[262] Edelman, *supra* note 210.

[263] *Id.*

complainants, and it is unclear whether such adjustments pose actual concerns, or are merely "distractions."[264] Moreover, to the extent that Google does "manually" manipulate results, it does so only rarely and only to remove spam sites, which cannot always be adequately or immediately blocked through its algorithm alone.[265] Increasing the cost of undertaking such interventions could be costly.[266]

Nevertheless, Edelman is indifferent to these realities:

> I credit that Google would respond to the proposed disclosure requirement by reducing the frequency of manual adjustments. But that's exactly the point: Results that do not flow from an algorithmic rule of general applicability are, by hypothesis, ad hoc. Where Google elects to use such methods, its market power demands outside review.
>
> Grimmelmann argues that these ad hoc result adjustments are a "distraction." But if Google's manual adjustments ultimately prove to be nothing more than penalties to spammers, then regulators will naturally turn their attention elsewhere. Meanwhile, by forcing Google to impose penalties through general algorithms rather than quick manual adjustments, Google will face increased burdens in establishing such penalties—more code

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[264] Grimmelmann, *supra* note 3, at 457.

[265] *See* Rachel Whetstone, *Controversial Content and Free Expression on the Web: A Refresher*, GOOGLE PUB. POL'Y BLOG (Apr. 19, 2010, 1:35 PM), http://googlepublicpolicy.blogspot.com/2010/04/controversial-content-and-free.html ("We do not remove content from search globally except in narrow circumstances, like child pornography, certain links to copyrighted material, spam, malware, and results that contain sensitive personal information like credit card numbers."); Adam Kovacevich, *Out Op-Ed: Regulating What Is "Best" in Search?*, GOOGLE PUB. POL'Y BLOG (July 15, 2010, 5:41 PM), http://googlepublicpolicy.blogspot.com/2010/07/our-op-ed-regulating-what-is-best-in.html (reposting Mayer, *supra* note 156); *see also* Rob Hof, *Matt Cutts: How Google Deals with Web Spam*, BLOOMBERG BUSINESSWEEK (Oct. 4, 2009), http://www.businessweek.com/the_thread/techbeat/archives/2009/10/matt_cutts_goog.html.

[266] Grimmelmann, *supra* note 3, at 457.

> required and, crucially, greater likelihood of an email or meeting agenda revealing Google's genuine intent.[267]

For Edelman, then, the proposed remedy should be required because it might increase the cost of Google engaging in conduct in which there is no evidence it is engaging. Moreover, the fact that such a remedy would impose "increased burdens," even on undeniably pro-competitive conduct (for example, minimizing spam), is actually a *feature*, not a bug, according to Edelman, because the combination of: (more costly and potentially less-effective search results + the ambiguous possibility of the accidental revelation of Google's intent) > (cheaper and more effective search results + the ambiguous possibility of as-yet-unidentified manipulation for competitive advantage). The claim is unrealistic and unsupported in its presumption about the consequences of mandated disclosure for *desirable* behavior,[268] asserting that these will actually be positive because of what disclosure will reveal about Google's "intent," and assuming away the value of decreased spam (and increased relevance) that could be lost. In turn, the assumption that revelation of Google's intent would have intrinsic positive value is based upon an unsupported assumption that intent evidence is relevant to determining anticompetitive outcomes.[269]

More importantly, however, it is unclear how such disclosures would improve consumer outcomes, absent unproven assumptions about the costs to consumers of the disclosed conduct and unwarranted assumptions about the efficacy and propriety of regulators and competitors acting on the disclosed information (or complaining about information that is not disclosed). Indeed, without evidence

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[267] Edelman, *supra* note 210.

[268] *See generally* Geoffrey A. Manne, *The Hydraulic Theory of Disclosure Regulation and Other Costs of Disclosure*, 58 ALA. L. REV. 473 (2007).

[269] *See generally* Geoffrey A. Manne & E. Marcellus Williamson, *Hot Docs vs. Cold Economics: The Use and Abuse of Business Documents in Antitrust Enforcement and Adjudication*, 47 ARIZ. L. REV. 609 (2005).

that these manipulations harm consumers, forcing search engines to disclose each and every manual manipulation would merely add significant compliance and administrative costs to the search engine system, without introducing commensurate consumer benefits.[270]

Moreover, we must be wary of inundating consumers with information. Consumers use search engines precisely because doing so decreases the amount of knowledge they must have and the effort they must expend prior to finding their desired results. Accordingly, requiring too much disclosure may very well prevent users from seeking any information at all.[271] The miracle of search engines is that they drive search and information costs down to nearly zero, while ensuring that the resulting avalanche is not an overload but is instead targeted and relevant. This is a monumental advantage to consumers, who would otherwise be lost in an abyss of sites, with no guidance as to how to traverse the terrain. Mandated disclosure regimes unsupported by evidence of consumer harm necessarily trade away from these benefits, and from antitrust's consumer welfare standard, to some other perceived benefit, such as preserving democracy. But not only are these substitute standards elusive and almost impossible to quantify in the search engine context, there is also no evidence that they are threatened under the current regime, nor is any effort made to assess whether the proposed remedies are either substantively or cost-effective.[272]

Additionally, requiring disclosure of search engine algorithms and other sorting mechanisms can put the entire

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[270] Manne, *supra* note 268. Another suggestion, in the case of exclusionary harm, i.e., harm arising from one's absence from a page upon which one feels entitled to appear, is to provide a right to a limited explanation of the reason why a particular result was not more highly ranked. Pasquale, *supra* note 175, at 117. Yet delineating precisely when such a right is established and exactly how much a search engine must do to provide a "limited explanation" are each quite costly.

[271] On problems of information overload, see Troy A. Paredes, *Blinded by the Light: Information Overload and Its Consequences for Securities Regulation*, 81 WASH. U. L. Q. 417 (2003).

[272] *See supra* Part V.

operation and efficiency of a search engine in serious jeopardy:

> Search engine manipulators make their living by reverse engineering search algorithms. Search engines are able to preserve a layer of genuine, useful results through a combination of keeping precise algorithmic details secret and changing their algorithms to foil detected SEO techniques. Mandated disclosure undermines the former; mandated results undermine the latter.[273]

As such, disclosure could allow such entities to game the system. While PageRank's original algorithm is patent protected,[274] trade secret law protects all subsequent adjustments Google makes to the algorithm.[275] Courts grant trade secret protection only when the underlying information is important and proprietary and the party seeking protection has demonstrated that "it has historically sought to maintain the confidentiality of this information."[276] Accordingly, trade secret protection is a court's recognition of the critical importance of retaining the secrecy of the underlying information. Compelling search engines to share this information, then, would almost by definition destroy their businesses.

Search neutrality proponents counter that neutral third parties could be utilized to retain the secrecy of algorithmic information when necessary, while revealing enough to discern whether bias has occurred.[277] Bracha and Pasquale,

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[273] Grimmelmann, *supra* note 11, at 56.

[274] U.S. Patent No. 6,285,999 (filed Jan. 9, 1998).

[275] *See, e.g.*, Viacom Int'l Inc. v. Youtube Inc., 253 F.R.D. 256, 259 (S.D.N.Y. 2008) ("The search code is the product of over a thousand person-years of work. There is no dispute that its secrecy is of enormous commercial value. Someone with access to it could readily perceive its basic design principles, and cause catastrophic competitive harm to Google . . . ."); Gonzales v. Google Inc., 234 F.R.D. 674 (N.D. Cal. 2006) (referring to "Google's trade secrets").

[276] *Gonzales*, 234 F.R.D. at 684.

[277] *See, e.g.*, Dan Burk & Julie Cohen, *Fair Use Infrastructure for Rights Management Systems*, 15 HARV. J.L. & TECH. 41, 55, 58–65 (2001)

for example, suggest that a regulatory or court body modeled on the Foreign Intelligence Surveillance Courts might prove beneficial.[278] However, these arguments are unconvincing, as such bodies are routinely criticized for failing to truly analyze the requests before them, serving instead to lend false credibility to a rubber stamp process.[279] Even if such disclosures were viable in an individual case, on a large scale, such a scheme would likely be quite expensive, impose unwarranted and serious risks, and encourage competitors to bring meritless claims against search engines in the hope that they may gain valuable information in the process.

VII. CONCLUSION

Search bias is not a function of Google's large share of overall searches. Rather, it is a feature of competition in the search engine market, as evidenced by the fact that Google's rivals also exercise editorial and algorithmic control over what information is provided to consumers and in what manner. Consumers rightly value competition between search engine providers on this margin; this fact alone suggests caution in regulating search bias at all, much less with an ex ante regulatory schema that defines the margins upon which search providers can compete. The strength of economic theory and evidence demonstrating that regulatory restrictions upon vertical integration are costly to consumers,

(arguing that trusted third parties could be given "rights management keys," and have discretion to decide when disclosure is appropriate); Kenneth C. Wilbur & Yi Zhu, *Click Fraud* 21 (2008) (unpublished manuscript), *available at* http://ssrn.com/abstract=1083835 (arguing that a neutral third party could authenticate search engine's click fraud detection mechanisms while maintaining the requisite confidentiality).

[278] Bracha & Pasquale, *supra* note 3, at 1204.

[279] *See, e.g.*, JAMES BAMFORD, THE PUZZLE PALACE: A REPORT ON AMERICA'S MOST SECRET AGENCY 368 (1982); Nola K. Breglio, *Leaving FISA Behind: The Need to Return to Warrantless Foreign Intelligence Service*, 113 YALE L.J. 179, 188–90 (2003) (finding that of the over 16,000 applications the FISC had reviewed by 2001, not a single one had been denied, and noting that "[t]here is little question that these judges exercise virtually no judicial review"). Moreover, the FISC has been described as "the strangest creation in the history of the federal judiciary."

impede innovation, and discourage experimentation in a dynamic marketplace support the conclusion that neither regulation of search bias nor antitrust intervention can be justified on economic terms. Search neutrality advocates touting the non-economic virtues of their proposed regime should bear the burden of demonstrating that they exist beyond the Nirvana Fallacy of comparing an imperfect private actor to a perfect government decision maker, and further, that any such benefits outweigh the economic costs described above.