

**OLD IS NOT ALWAYS WISE: THE INAPPLICABILITY OF THE
SHERMAN ACT IN THE AGE OF THE INTERNET**

Jenny Paquette

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INTRODUCTION

Innovation is often bred of necessity. When Larry Page and Sergey Brin created Google, they didn't look for a company to start—they looked for a problem to solve.¹ Currently, antitrust in the United States faces a clear problem: inapplicability to new technology. The Sherman Act (“the Act”), enacted in 1890, is the primary antitrust statute in the United States.² It was created to combat abuses by companies that could potentially harm the American people.³ At that time, America was dominated by agriculture, railroads, and industry.⁴ While the types of businesses that existed in 1890 still exist, today the nation is also home to a vast array of companies specializing in fast-moving technology.⁵ As businesses evolve, so do the ways in which they can harm the public.⁶ If there is any hope of protecting consumers, the law must keep pace with this evolution.⁷

This paper explains the complications of applying the Sherman Act to the world of online search and offers an alternative approach. Section II provides the necessary background to understanding search engines and the ways in which they may be anticompetitive. It also explains the current state of antitrust law in the United States, and the ways in which it may apply to search engines. Section III discusses the shortcomings of the current state of the law and proposes an updated framework. The proposed framework mimics intellectual property law, dividing antitrust into industry-specific approaches with a common goal of consumer welfare. Section III then details how the Internet industry may look under such a framework and how an analysis of Google should be approached.

I. OVERVIEW

The following Section provides an overview of information necessary to understand the shortcomings of the antitrust laws of the United States in regulating search engines. Specifically, Part II.A of this paper provides a history

1. Alyson Shontell, *13 Unusual Ways Sergey Brin And Larry Page Made Google The Company To Beat*, BUSINESS INSIDER: TECH (May 4, 2011, 3:18 PM), <http://www.businessinsider.com/history-sergey-brin-larry-page-and-google-strategy-2011-3?op=1>.

2. 15 U.S.C. § 1 (2012).

3. See U.S. DEP'T OF JUSTICE, *Competition and Monopoly: Single-Firm Conduct Under Section 2 of the Sherman Act*, 9 (2008) http://www.justice.gov/sites/default/files/atr/legacy/2008/09/12/236681_chapter1.pdf (last visited June 15, 2017) [hereinafter DOJ *Sherman Act*].

4. See *infra* note 284 and accompanying text for discussion of the state of industry at the time of the enactment of the Sherman Act.

5. See *infra* Parts II.B.2.a and II.B.3 for discussion of the Internet and how online markets differ from traditional industry.

6. See, e.g., David A. Hyman & David J. Franklyn, *Search Bias and the Limits of Antitrust: An Empirical Perspective on Remedies*, 55 JURIMETRICS J. 339, 343–44, 358–71 (2015) (describing allegations that Google's search algorithms unfairly bias their competitors and the way search results effect consumer behavior).

7. See *infra* notes 284–89 and accompanying text for discussion of the evolution of industry. See *infra* Parts III.B and III.C for a proposed new framework for antitrust law.

of the development of Internet search engines and the business models they utilize, discusses the emergence of Google and explains how it differed from its predecessors, and explains anticompetitive allegations made against Google. Part II.B provides a history of the Sherman Act and explains how it is applied by courts, as well as how an analysis of an online market differs from that of traditional industries. Part II.C discusses the evolution of antitrust law and provides an overview of exceptions to antitrust liability.

A. *The Key Masters of the Internet: Search Engines*

Search engines allow us to locate what we are looking for in a vast sea of information online.⁸ Over time, they have evolved from a basic “ten blue links” format to what we are familiar with today.⁹ Since its appearance, Google has provided search services that are superior to those of its predecessors by providing more relevant results to users.¹⁰ As search engines are lucrative businesses, the rise to popularity of Google’s search engine has garnered criticism from its competitors that it has acted in an anticompetitive manner.¹¹ To assess such allegations of anticompetitive action in the United States, the primary statute applied by courts is the Sherman Act.¹² As search engines differ greatly from traditional industries analyzed under this statute, an analysis of the search engine market necessarily looks very different.¹³ In certain prior instances of industries that did not quite fit a traditional Sherman Act analysis, courts and legislators have created exemptions to antitrust liability; as such, antitrust law has evolved significantly over time.¹⁴

1. *Seek and Ye Shall Find it Online: A Brief History of Internet Search*

Search engines as we know them have not existed for the full history of the Internet.¹⁵ Put simply, a search engine helps users to locate information and content that exists on the Internet.¹⁶ Every major application on the Internet involves a search engine in some capacity—whether it contains one, depends on

8. See *infra* Part II.A.1 for an introduction to Internet search engines generally.

9. See *infra* Part II.A.1 for an overview of the history of Internet search engines.

10. See *infra* Part II.A.2 for an overview of the emergence of Google and how it differed from its predecessors.

11. See *infra* Part II.A.3 for an overview of allegations against Google.

12. See *infra* Part II.B.1 for an introduction to the Sherman Act. See *infra* Section II.B.2 for an overview of how the Sherman Act is applied by courts.

13. See *infra* Parts II.B.2 and II.B.3 for an overview of how search engines differ from traditional industries in an antitrust analysis.

14. See *infra* Part II.C for an overview of the evolution of antitrust in the United States.

15. See *infra* notes 23–25 and accompanying text for an overview of the development of search engines.

16. James Grimmelmann, *The Structure of Search Engine Law*, 93 IOWA L. REV. 1, 6 (2007).

one to function, or is one itself.¹⁷ For example, the popular social media site Facebook employs a search engine that can be used to locate the profile pages of particular individuals, content that was posted by users, or other information on the site.¹⁸ The functions of search engines are diverse—from helping you locate entire websites, finding scholarly articles, locating sources for products you wish to purchase, or searching for specialized information such as an actor on the Internet Movie Database.¹⁹

The first iterations of the Internet in the 1970s were mainly scholarly databases used to host large amounts of information and share it among academics.²⁰ However, a library full of books without a way to find what you need “can be useless for all practical purposes. The same is true with the digital files on the Internet.”²¹ This problem was further complicated by a lack of uniformity in the format and production of digital content.²² Unlike books in a library that are indexed in a card catalog,²³ digital files did not have a cohesive organization to allow for easy indexing.²³ For the first twenty years that the Internet existed, it did not employ anything similar to the search engines we are now accustomed to, so the wealth of available information was neither easily accessible nor usable.²⁴ Eventually, as increasingly sophisticated technology helped evolve the early versions of the World Wide Web to what we see today, search engines began appearing.²⁵ These search engines indexed the content of publicly available information, allowing users to search for particular information.²⁶

Without the ability to interact with both users and content, a search engine is useless.²⁷ The function and use of search engines involves four parts: (1) indexing, in which the search engine gathers content and organizes it for presentation to users,²⁸ (2) queries, in which a user inputs information into the

17. *Id.*

18. FACEBOOK, <http://www.facebook.com> (last visited June 15, 2017).

19. IMDb, <http://imdb.com> (last visited June 15, 2017).

20. *See generally* Amy Tracy Wells, *A Portrait of Early Internet Adopters: Why People First Went Online—and Why They Stayed*, PEW INTERNET & AM. LIFE PROJECT (Feb. 6, 2008), http://www.pewinternet.org/files/old-media/Files/Reports/2008/PIP_Early_Adopters.pdf.

21. Greg Lastowka, *Google’s Law*, 73 BROOK. L. REV. 1327, 1332 (2008).

22. *See id.*

23. *See id.* at 1332–33.

24. *Id.*

25. *Id.* at 1334.

26. For a more in-depth discussion of the history of Internet search, see *id.* at 1332–34.

27. Grimmelmann, *supra* note 16, at 7.

28. *Id.* at 7–8. Search engines index online content by gathering the content from providers in a variety of ways and sorting the information for easy use. *Id.* For generalized search engines, this process is done primarily by software agents, called “spiders,” “robots,” or “crawlers,” that comb through information on the web automatically. *Id.* at 7 (internal quotation marks omitted). For more specialized search engines, the process may also involve content providers providing the information themselves to be used for indexing. *Id.* at 7–8. For more in-depth explanation of indexing, see *id.*

search engine to indicate what information she is seeking;²⁹ (3) results, presented to the user by the search engine; and (4) content, obtained by the user.³⁰ The defining step of the search process is the results.³¹ Typically, a search engine will display web page results as a list of links, generally ten at a time, starting with what it deems to be the most relevant to the entered query, followed by information decreasing in relevancy.³² This relevancy factor is where search engines have varied the most over time, and where most innovation has been focused.³³ Some search engines, such as Google's PageRank, employ additional indexes that weigh the popularity of a website as part of its relevance.³⁴ At the end of the day, the result matters most because "the user cares about the content" that is made available, and it is the results that allow the user to access content.³⁵

Conceptually, the results that search engines return can be categorized as "horizontal" or "vertical" search.³⁶ The typical model of a search engine is a horizontal search.³⁷ Horizontal search engines are created to allow the user to search for anything that is publicly available on the Internet.³⁸ Google, for example, is primarily a horizontal search engine.³⁹ Vertical search engines operate differently, and "are specialized . . . to provide search results that are tailored to a particular area."⁴⁰ Such vertical search engines may be specialized by location,

29. *Id.* at 8–9. "A query is typically only an approximation of the user's intentions." *Id.* at 8. For more in-depth explanation of queries, see *id.* at 8–9.

30. *Id.* at 7.

31. *Id.* at 9.

32. *Id.*

33. See *id.* at 9–11. The way in which search engines can best differentiate themselves is how they organize and present available content to the user. See *id.* Results are what the user cares most about and thus are at the core of search engine business models. See Nadine Höchstötter & Dirk Lewandowski, *What Users See – Structures in Search Engine Results Pages*, 179 INFORMATION SCIENCES 3–10 (2009), <http://arxiv.org/ftp/arxiv/papers/1511/1511.05802.pdf>. For a more in-depth discussion of search engine results, see Grimmelmann, *supra* note 16, at 9–11.

34. Grimmelmann, *supra* note 16, at 10. For discussion of PageRank, see *infra* notes 64–68 and accompanying text.

35. Grimmelmann, *supra* note 16, at 11. Some of the content that is made available to users is provided by the search engine itself, through cached content and archived content. For discussion of these, see *id.*

36. Andrew Langford, *gMonopoly: Does Search Bias Warrant Antitrust or Regulatory Intervention?*, 88 IND. L.J. 1559, 1564 (2013).

37. *Horizontal Search Engine*, PCMAG.COM: ENCYCLOPEDIA, <http://www.pcmag.com/encyclopedia/term/57778/horizontal-search-engine> (last visited June 15, 2017).

38. Langford, *supra* note 36, at 1564 (citing Danny Sullivan, *Google Launches "Universal Search" & Blended Results*, SEARCH ENGINE LAND (May 16, 2007, 2:33 PM), <http://searchengineland.com/google-20-google-universal-search-11232>).

39. *Vertical Search Engine*, PCMAG.COM: ENCYCLOPEDIA, <http://www.pcmag.com/encyclopedia/term/57892/vertical-search-engine> (last visited June 15, 2017).

40. Langford, *supra* note 36, at 1564 (citing Sullivan, *supra* note 38).

topic, industry, or in other ways that may be most relevant to the engine's target user.⁴¹

Search engines are lucrative businesses.⁴² While most search engines were designed to make information available to those seeking it, like anything else, money is needed to run them.⁴³ The most common business model for modern search engines is "contextual advertising," which involves "the search engine show[ing] its users advertisements alongside the search results. . . . These ads are still often search 'results' in the sense that the search engine presents particular ads based on the user's query."⁴⁴ The ads are based on the same technology and integrated into the results.⁴⁵ The user is presented with organic search results and results appearing because the content provider paid for their appearance.⁴⁶ The underlying business model that most search engines use is straightforward: "Provide high-quality results to attract users, sell ads, and rake in the bucks."⁴⁷ Since search engines are so lucrative, the field is competitive and thus, in a constant state of flux.⁴⁸

2. The New Kid on the Block: Google Makes its Debut

To best understand the current state of search engines, it is important to discuss the current leader in the industry—Google. Google rose to its current position by offering the market a new and improved search engine that provided its users results with superior relevancy.⁴⁹ Since its introduction, Google has continued to advance and improve in several ways.⁵⁰

Search engines of the past did not provide the fast, relevant results we are accustomed to today.⁵¹ Most of the search engines that existed prior to 1997 were structured on a "portal" model, meaning they made money through advertising by negotiating deals with traditional media companies to provide the best available content.⁵² This meant that the content served to users was not necessarily the most

41. *Vertical Search Engine*, *supra* note 39.

42. *See generally* Hope King, *Google shares soar 13%*, CNN MONEY (July 17, 2015, 10:57 AM), <http://money.cnn.com/2015/07/16/technology/google-earnings-q2/>.

43. *See* Grimmelmann, *supra* note 16, at 11.

44. *Id.*

45. *See id.* at 11–12.

46. *Id.* Organic search results are what are produced by a search engine's general crawl of the web. *See* Höchstötter & Lewandowski, *supra* note 33, at 3. For a more in-depth introduction to organic search results, see James Grimmelmann, *Speech Engines*, 98 Minn. L. Rev. 868, 877–879 (2014).

47. Grimmelmann, *supra* note 16, at 44.

48. *See infra* Part II.A.3 for a discussion of the instability of the search market.

49. *See infra* Part II.A.3 for overview of how Google differed from its predecessors.

50. *See infra* notes 56–80 and accompanying text for an overview of Google's advancements.

51. Lastowka, *supra* note 21, at 1337.

52. *Id.* at 1335 (explaining how search engines would deal with non-Internet media companies to secure news, information, services, and entertainment).

useful or relevant to their needs.⁵³ In 1997, Google founders Sergey Brin and Larry Page set out to build a new search engine.⁵⁴ Launching a portal model search engine required significant funds and, as graduate students, the pair did not have money to invest.⁵⁵ As a result, Google was an entirely new approach to search engines, appearing as a bare-bones, fast-loading home page.⁵⁶

Initially, Google search results appeared as a simple “ten blue links,” featuring only unpaid search results.⁵⁷ While the minimalistic appearance of the home page was certainly attention-grabbing for the time, the real appeal to users was the superior relevancy of the search results Google produced.⁵⁸ At the time, most search engines determined the relevancy of websites by how many times the user’s query terms appeared on a page.⁵⁹ Google’s founders created a different approach, which they initially called “BackRub;” the search results were based on “backing links,” or the references to each site on other sites.⁶⁰ This allowed the search engine to more accurately determine the credibility and usefulness of a site.⁶¹ For example, if one were to search for information on the science behind coffee by simply entering “coffee” as a query term, a typical search engine would list pages in an order ranked by how frequently the term “coffee” appeared. This method equated frequency with relevance.⁶² As such, the top result may be a blog by David Lynch, who posts daily about the number of times he drank coffee while directing a film, which is unlikely to be of great use.⁶³ Google’s approach, on the other hand, through backing links, would place this blog below often-cited

53. *Id.* at 1337.

54. *Id.* at 1334.

55. *Id.* at 1334–36.

56. *Id.* at 1336.

57. David A. Hyman & David J. Franklyn, *Search Bias and the Limits of Antitrust: An Empirical Perspective on Remedies*, 55 JURIMETRICS J. 339, 342 (2015).

58. Lastowka, *supra* note 21, at 1337.

59. Mark Hall & William Hosch, *Google Inc.*, ENCYCLOPAEDIA BRITANNICA (Aug. 11, 2015), <http://www.britannica.com/topic/Google-Inc>.

60. *Id.* BackRub initially operated on Stanford University’s servers and later developed into what we now know as Google. Google existed as BackRub for over a year, at which time it began occupying too much bandwidth and Google’s founders began the move to Google.com. GOOGLE, *Our History in Depth: 1995–1997*, <https://www.google.com/about/company/history/> (last visited June 15, 2017).

61. Sergey Brin & Lawrence Page, *The Anatomy of a Large-Scale Hypertextual Web Search Engine*, <http://www7.scu.edu.au/1921/com1921.htm> (last visited June 15, 2017).

62. See Panagiotis Takis Metaxas, *On the Evolution of Search Engine Rankings*, 5–7, http://cs.wellesley.edu/~pmetaxas/Metaxas-Evolution_Search_Engine_Rankings.pdf (last visited June 15, 2017).

63. David Lynch is an American film writer, producer, and director. See IMDb, *David Lynch*, http://www.imdb.com/name/nm0000186/?ref_=fn_al_nm_1 (last visited June 15, 2017). He also has a reputation for being an intense coffee lover. See David Lynch, *Obsessed: Coffee*, HUFFINGTON POST: THE BLOG (Jan. 20, 2012, 7:52 AM), http://www.huffingtonpost.com/david-lynch/coffee_b_1216532.html.

scholarly articles about the chemical compounds in coffee or the medical effects of drinking coffee in excess.⁶⁴

In addition to utilizing backing links, Google also began utilizing PageRank, which it later patented.⁶⁵ This feature determines the popularity of a web page through a simple formula that assigns more weight to the relevance of pages that are visited more frequently.⁶⁶ This is “essentially a way of letting the Web speak for itself.”⁶⁷ Again using the example of David Lynch’s blog: Assume it was visited by only a few extreme fans of his films. If it contained otherwise comparable information to an article written by the New York Times that was visited by a large number of the paper’s subscribers, the New York Times article would have more weight and appear first in the search results.⁶⁸ With the combination of the use of backing links and PageRank, Google’s search results were much more relevant than those of other search engines, and it quickly gained popularity.⁶⁹

While Brin and Page initially held strong beliefs against advertising,⁷⁰ developing Google was not free, and the two “had accepted millions of dollars in venture capital” within a few years.⁷¹ Reluctantly, in 2000, Google made the first major change to its search engine model with the introduction of its first paid ads on the right side of the results page.⁷² These ads are what made Google one of the most financially successful companies of its time, composing the vast majority of the company’s revenues.⁷³ To implement these ads, Google integrated an auction model of sale, based on GoTo.com’s keyword-auction pricing model.⁷⁴ Since that time, Google has kept its advertising model largely the same.⁷⁵

64. Brin & Page, *supra* note 61.

65. Lastowka, *supra* note 21, at 1337.

66. *Id.*

67. *Id.*

68. *See generally* Brin & Page, *supra* note 61 (explaining how hypertext can be manipulated to generate more relevant search results).

69. Lastowka, *supra* note 21, at 1337.

70. *Id.* at 1331. “Brin and Page were once convinced that advertising should play no part in Google’s business model. They believed that a search engine funded by advertisers would be ‘inherently biased towards the advertisers and away from the needs of the consumers.’ Google was created to fulfill a need for a search engine that was ‘transparent and in the academic realm.’” *Id.* (quoting Brin & Page, *supra* note 61).

71. *Id.* at 1338.

72. Hyman & Franklyn, *supra* note 57, at 342.

73. Lastowka, *supra* note 21, at 1330–31. In 2007, the company reported that ninety-nine percent of its revenue came from the sale of advertising. *Id.* at 1331 (citing Google Inc., Annual Report (Form 10K), at 43 (Mar. 1, 2007), <http://www.sec.gov/Archives/edgar/data/1288776/000119312507044494/d10k.htm>).

74. *Id.* at 1339. The model was so wholesale copied, in fact, that Google later settled a patent infringement lawsuit for its use. *Id.*

75. *Id.* at 1340. Online ads were initially sold only on a cost-per-impression pricing model, meaning the advertiser was charged only in accordance with how many times the ad was displayed online. James D. Ratliff & Daniel L. Rubinfeld, *Online Advertising: Defining Relevant Markets*, 6 J. COMP. L. & ECON. 653, 657 (2010). This was similar to advertising in offline media—the

The founders of Google set out to create a search engine that would “understand exactly what you mean and give you back exactly what you want.”⁷⁶ Over time, the company implemented changes to “get people the information they’re looking for as quickly and effortlessly as possible.”⁷⁷ Beginning in 2007, the company moved to a “universal search” model—a shift that ultimately led to the majority of the complaints discussed in this paper.⁷⁸ For some queries where localized results would be useful to the user, Google began imbedding “vertical searches” into the presented results.⁷⁹ These integrated results included several services that are now well-known to the average Internet user, such as Google Maps, Google Shopping, and Google Places (now known as Google Local).⁸⁰ With these changes, Google’s own services took more space on its results page, leaving less room for competitors’ products.⁸¹

advertiser was paying for the number of times their ad appeared. *Id.* GoTo.com instead used a pay-per-click model, meaning advertisers were charged only for the users who clicked on their ad. GoTo.com set the price for each click through an auction and listed the ads in descending order of the price the advertiser paid. *Id.* Each time a user clicked on an ad, the advertiser paid the price they had bid for the spot in which their ad appeared. James D. Ratliff & Daniel L. Rubinfeld, *Online Advertising: Defining Relevant Markets*, 6 J. COMPETITION L. & ECON. 653, 657 (2010).

76. Don Reisinger, *Ugly documents surface in antitrust case that Google settled with FTC*, C|NET (Mar. 20, 2015, 9:46 AM), <http://www.cnet.com/news/google-causes-real-harm-to-consumers-and-to-innovation-ftc-says/>.

77. Bianca Bosker, *Google Adds More Of Its Own Goodies To Search Results, Despite Antitrust Concerns*, HUFFINGTON POST: TECH (Nov. 2, 2011, 11:37 AM), http://www.huffingtonpost.com/2011/11/02/google-adds-search-features_n_1071323.html [hereinafter Bosker, *Google Adds More*]. Examples of such changes include additions of features such as Google Toolbar in December of 2000 (which allowed users to search the web from any page, rather than first directing to Google.com), Google Images in July of 2001, Google APIs in April 2002 (aimed at web developers), Google News in September 2002, Google Shopping in December 2002 (which first appeared as “Froogle”), Google Scholar in November 2004 (which allows searches of scholarly sources), Google Maps in February 2005, Google Translate in April 2006 (which now provides translations between over seventy languages), and Autocomplete in August of 2008 (initially called Google Suggest, which predicts a user’s search query). GOOGLE, *supra* note 60.

78. Hyman & Franklyn, *supra* note 57, at 342 (citing Marissa Mayer, *Universal Search: The Best Answer Is Still the Best Answer*, GOOGLE OFFICIAL BLOG (May 16, 2007), <http://googleblog.blogspot.com/2007/05/universal-search-best-answer-is-still.html>). See *infra* Part II.A.3 for a discussion of complaints against Google.

79. See Bosker, *Google Adds More*, *supra* note 77.

80. Hyman & Franklyn, *supra* note 57, at 342; see also Bosker, *Google Adds More*, *supra* note 77.

81. See Bosker, *Google Adds More*, *supra* note 77 (discussing the complaints of rival services).

3. With Great Power Comes Great Responsibility . . . and Lots of Complaints from Competitors

As is to be expected when a company takes a market by storm, Google's success garnered a vast array of criticism.⁸² While there have been several complaints for actions related to the many Google products that are beyond the scope of this paper, the primary criticism against Google focused on its search engine.⁸³ Despite a lack of complaints from consumers alleging harms, Google has been under scrutiny several times for alleged anticompetitive search practices.⁸⁴ Search engines that compete with Google for users generate the majority of such complaints.⁸⁵ Most complaints focus on Google's practice of integrating vertical searches.⁸⁶ Critics allege that Google ensures that its own services appear above potential competitors, serving to push the user's gaze away from competitors and toward Google in a manner that serves to disadvantage competition.⁸⁷

In September 2011, the U.S. Senate Judiciary Subcommittee on Antitrust, Competition Policy, and Consumer Rights held a hearing regarding Google and its search practices, particularly its alleged practice of preferencing its own products to those of competitors in its search results.⁸⁸ The committee sought to probe whether Google's search practices were anticompetitive.⁸⁹ The hearing included a panel consisting mainly of individuals representing Google's competitors, such as Colin Gillis of BGC Partners; Jeremy Stoppelman, the CEO of Yelp; and written testimony from Nextag CEO Jeffrey Katz.⁹⁰ The Senate Judiciary Subcommittee heard extensive testimony by Google Chairman Eric

82. For an overview of these criticisms, see *infra* notes 88–115 and accompanying text.

83. See *infra* notes 98–102 and accompanying text for discussion of these criticisms.

84. See *infra* notes 90–95 and accompanying text for discussion of these competitors.

85. Diane Bartz, *DuckDuckGo, Google Competitor, Says It's Getting Shut Out*, HUFFINGTON POST: TECH (Nov 21, 2012, 7:25 PM), http://www.huffingtonpost.com/2012/11/22/duckduckgo-google_n_2174286.html. Such complaints have come from companies such as Nextag, a price comparison site; the local business review site Yelp; travel review sites such as Kayak and TripAdvisor; and travel booking sites such as Travelocity, Hotwire, and Expedia. *Id.*

86. See Steve Lohr, *Drafting Antitrust Case, F.T.C. Raises Pressure on Google*, N.Y. TIMES: TECHNOLOGY (Oct. 12, 2012), <http://www.nytimes.com/2012/10/13/technology/ftc-staff-prepares-antitrust-case-against-google-over-search.html?pagewanted=all&r=0> (noting that Google's practice of "preferencing" engineers search results to highlight their own services). For discussion of vertical search results and Google's integration of them into its results, see *supra* notes 78–80 and accompanying text.

87. Hyman & Franklyn, *supra* note 57, at 342–43.

88. Diane Bartz & Malathi Nayak, *Eric Schmidt Defends Google at Senate Antitrust Hearing*, HUFFINGTON POST: TECH (Nov. 21, 2011), http://www.huffingtonpost.com/2011/09/21/eric-schmidt-google-antitrust-senate_n_974343.html.

89. *Id.*

90. *Id.*

Schmidt.⁹¹ According to supporters of Google, such as attorney Stephen Houck, “the complaints about Google were far removed from what the antitrust laws require for a monopolization case.”⁹²

Following the hearing, Senators Mike Lee and Herb Kohl wrote a letter expressing their concerns to the Federal Trade Commission (FTC) chairman.⁹³ In the letter, the senators asked the FTC to open an antitrust investigation to review how Google’s search promotes Google’s other products.⁹⁴ The Senators [H]ighlighted testimony by the CEOs of Yelp and Nextag that Google had stolen traffic from their sites by preferencing its own products; cited Google executive Marissa Mayer’s 2007 admission that the search giant has intentionally ranked its own services ahead of other sites’; and pointed out that Google’s lone competitor, Microsoft’s Bing, has been hemorrhaging around \$2 billion a year.⁹⁵

Along with other concerns, the Senators also “cited statistics indicating Google claims 65 to 70 percent of the Internet search market and powers ‘at least’ 95 percent of queries performed on mobile devices.”⁹⁶ The senators requested that the FTC also require Google to label its promoted links in a way that is clear to users that they are not part of the organic results returned by their query.⁹⁷

In 2012, the FTC investigated Google for allegations of search bias favoring Google’s own products.⁹⁸ The FTC’s investigation was performed under section 5 of the Federal Trade Commission Act, which grants the Commission broader enforcement power than would otherwise be allowed for by the Sherman Act.⁹⁹ The main charge against Google in the FTC investigation was that it

91. Stephen D. Houck, *Google, Monopoly and Antitrust 101*, HUFFINGTON POST: TECH: THE BLOG (Oct. 7, 2011, 12:58 PM), http://www.huffingtonpost.com/stephen-d-houck/google-antitrust-hearings_b_1000205.html.

92. *Id.* (arguing that the complaints showed neither the existence of a monopoly power, nor the required second element of predatory conduct to gain or maintain such a monopoly). Stephen Houck was formerly the chief of the Antitrust Bureau for the New York State Attorney General’s Office and now works as an adviser to Google. *Id.*

93. Bianca Bosker, *Google Practices Merit FTC Antitrust Probe, Senators Argue*, HUFFINGTON POST: TECH (Dec. 19, 2011, 7:37 PM), http://www.huffingtonpost.com/2011/12/19/google-ftc-antitrust-probe_n_1159164.html [hereinafter Bosker, *Google Antitrust Probe*].

94. Nilay Patel, *Senators Herb Kohl and Mike Lee urge FTC to investigate Google for antitrust violations*, THE VERGE: POLICY & LAW (Dec. 19, 2011, 7:26 PM), <http://www.theverge.com/2011/12/19/2647559/senators-herb-kohl-and-mike-lee-urge-ftc-to-investigate-google-for>.

95. Bosker, *Google Antitrust Probe*, *supra* note 93.

96. *Id.*

97. Patel, *supra* note 94. See *supra* note 45 for an explanation of organic results.

98. Hyman & Franklyn, *supra* note 57, at 340.

99. Elizabeth Hand, *Antitrust Analysis for Online Search Engines*, JURIST (Mar. 3, 2014, 12:23 PM), <http://jurist.org/dataline/2014/03/shanshan-liu-google-antitrust.php>. “Extending beyond the scope of the Sherman Act, Section 5 of the Federal Trade Commission Act (FTC Act) prohibits ‘unfair methods of competition’, the statute empowers the FTC a broad discretion to ‘define and proscribe an unfair competition, even though the practice does not infringe either the

unfairly promoted its own vertical search results, pushing the results of competing services out of the users' view.¹⁰⁰ The thrust of the accusations was that Google was unfairly determining that its own results were more relevant to queries, thus appearing above other possible options.¹⁰¹ Google took the stance that it was simply fulfilling what it saw to be its primary duty: providing the best search results to users.¹⁰² The problem with investigating these accusations within an antitrust and consumer protection framework is that the goals of advancing Google's business and providing the most effective search engine "aren't necessarily mutually exclusive."¹⁰³

The FTC announced in 2013 that it was closing its investigation and would not be bringing a suit against Google, having found insufficient evidence of "search bias" to warrant doing so.¹⁰⁴ The FTC's outside counsel confirmed that Google "[u]ndoubtedly . . . took aggressive actions to gain advantage over rival search providers."¹⁰⁵ However, she also clarified that "the FTC's mission is to protect competition, and not individual competitors."¹⁰⁶ The evidence failed to show that Google's actions "stifled" any competition; therefore no antitrust suit was warranted.¹⁰⁷

However, in a settlement agreement with the FTC, Google agreed to change some of its practices.¹⁰⁸ Recently, the *Wall Street Journal* obtained, through an accidental transmission of the information, copies of portions of the FTC's reports summarizing its findings concerning Google's anticompetitive behavior.¹⁰⁹ These documents were not meant to be released to the public, and the *Wall Street Journal* claims it refused the FTC's request to return the documents.¹¹⁰ The information contained in the reports showed that Google

letter or the spirit of the antitrust laws." *Id.* See *infra* Part II.B for an explanation and discussion of the Sherman Act.

100. David Auerbach, *Google vs. the FTC*, SLATE: TECHNOLOGY (Mar. 25, 2015, 3:09 PM), http://www.slate.com/articles/technology/technology/2015/03/google_ftc_report_here_s_why_the_government_and_the_company_agreed_to_a.html.

101. *Id.*

102. *Id.*

103. *Id.*

104. Amy Schatz, *FTC Denies Report That Agency Ignored Staff Recommendation on Google*, RE/CODE: POLICY (Mar. 25, 2015, 4:40 PM), <http://recode.net/2015/03/25/ftc-denies-report-that-agency-ignored-staff-recommendation-on-google/>.

105. Press Release, Fed. Trade Comm'n, *Google Agrees to Change Its Business Practices to Resolve FTC Competition Concerns In the Markets for Devices Like Smart Phones, Games and Tablets, and in Online Search* (Jan. 3, 2013), <https://www.ftc.gov/news-events/press-releases/2013/01/google-agrees-change-its-business-practices-resolve-ftc> (internal quotation marks omitted).

106. *Id.*

107. *Id.*

108. Schatz, *supra* note 104; Reisinger, *supra* note 76.

109. Auerbach, *supra* note 100.

110. Reisinger, *supra* note 76.

volunteered to make changes.¹¹¹ Specifically, these documents show that Google agreed to modify its programming to allow its competitors to remove their information from Google's vertical search results.¹¹²

While the FTC has since released brief statements regarding their investigation into Google, it has failed to provide a detailed framework to explain its decision.¹¹³ It has been pointed out that the Google case "presents facts that shift away from the traditional antitrust analysis, and by choosing not to carry out further analysis, . . . reflect[s] a gap in . . . the US . . . antitrust regulators' analysis and interpretation with respect to cyberspace marketplace."¹¹⁴ Currently, a large gap remains in determining how to approach going forward allegations of antitrust violations by search engines.¹¹⁵

B. *Antitrust Law in the United States*

Search engines pose a number of unique concerns for antitrust analysis that are not presented by more traditional industries.¹¹⁶ The primary antitrust statute used in the United States is the Sherman Act.¹¹⁷ Courts have held that the Act is primarily used to protect consumer welfare.¹¹⁸ The Act requires that courts first determine the relevant market in which a firm operates, then determine whether that firm's actions are potentially harmful to consumers.¹¹⁹ The market for Internet search differs from that of traditional industries, which complicates such an analysis.¹²⁰ Additionally, the instability of the market for Internet search differs from traditional industries.¹²¹ Over time, exceptions have been made by courts or by legislatures to address circumstances in which typical Sherman Act analysis did not aptly apply to an industry.¹²²

1. The Sherman Act

Courts have consistently held that consumer welfare is the primary purpose for antitrust law and, thus, consumer harm is the primary measurement to

111. Brody Mullins, Rolfe Winkler & Brent Kendall, *Inside the U.S. Antitrust Probe of Google*, WALL ST. J.: TECH (Mar. 19, 2015, 7:38 PM), <http://www.wsj.com/articles/inside-the-u-s-antitrust-probe-of-google-1426793274>.

112. Reisinger, *supra* note 76.

113. See Mullins, Winkler & Kendall, *supra* note 111 (reviewing the statements made by the FTC which have not set forth any thorough explanation).

114. Hand, *supra* note 99.

115. *Id.*

116. See *infra* Parts II.B.2.b and II.B.3 for an overview of concerns unique to search engines in an antitrust analysis.

117. See *infra* Part II.B.1 for an introduction to the Sherman Act.

118. See *infra* Part II.B.1 for an overview of consumer welfare under the Sherman Act.

119. See *infra* Part II.B.2.a for an overview of how a relevant market is defined.

120. See *infra* Part II.B.2.b for an overview of how an Internet search market differs from other markets.

121. See *infra* Part II.B.3 for an overview of market stability online.

122. See *infra* Part II.C for an overview of the evolution of antitrust and such exceptions.

determine antitrust harm.¹²³ Accordingly, determinations of antitrust liability center on the impact of a firm's behavior on consumers.¹²⁴ The primary vehicle for antitrust enforcement in the United States is the Sherman Act.¹²⁵ Since its enactment, the Act has been used to bring cases against numerous corporations for a variety of undesirable actions that thwart competition, resulting in consumer harms.¹²⁶

Congress passed the Sherman Act in 1890 to combat market abuses by large corporations that held considerable power over the nation's economy at that time.¹²⁷ The Act provides for both criminal and civil sanctions against those found to be acting in a way that harms consumers.¹²⁸ Section 1 of the Act prohibits anticompetitive actions by multiple actors working together to restrain trade.¹²⁹ Section 2 of the Act focuses on monopolization, stating that "[e]very person who shall monopolize, or attempt to monopolize . . . shall be deemed guilty of a

123. See, e.g., *Brown Shoe Co. v. U.S.*, 370 U.S. 294, 320 (1962) (stating that the purpose of the Act is for the "protection of competition, not competitors"); *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 308 (3d Cir. 2007) (stating that the "primary goal of antitrust law is to maximize consumer welfare"); *Rebel Oil Co., Inc. v. Atl. Richfield Co.*, 51 F.3d 1421, 1445 (9th Cir. 1995) (stating that "because the Sherman Act's concern is consumer welfare, antitrust injury occurs only when the claimed injury flows from acts harmful to consumers"); *Westman Comm'n. Co. v. Hobart Int'l*, 796 F.2d 1216, 1220 (10th Cir. 1986) (stating that "the purpose of the antitrust laws is the promotion of consumer welfare" and therefore the focus is on a business's "effect on consumers, not on competitors").

124. See *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 458 (1993) ("The purpose of the [Sherman] Act is not to protect businesses from the working of the market; it is to protect the public from the failure of the market. The law directs itself not against conduct which is competitive, even severely so, but against conduct which unfairly tends to destroy competition itself. It does so not out of solicitude for private concerns but out of concern for the public interest.").

125. 15 U.S.C. § 1 (West 2004).

126. See *infra* notes 159–78 and accompanying text for a discussion of such actions and cases.

127. See Robert L. Bradley, Jr., *On the Origins of the Sherman Antitrust Act*, 9 CATO JOURNAL 737, 738 (1990). Over the past 100 years, the essential goal of antitrust laws, like the Sherman Act, has been to "protect the process of competition for the benefit of consumers." *The Antitrust Laws*, GUIDE TO ANTITRUST LAWS, FEDERAL TRADE COMMISSION, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/antitrust-laws> (last visited June 15, 2017) [hereinafter FTC, *The Antitrust Laws*]. In *Northern Pacific Railway Co. v. United States*, the Supreme Court stated the purpose of the Sherman Act as "a comprehensive charter of economic liberty aimed at preserving free and unfettered competition as the rule of trade. It rests on the premise that the unrestrained interaction of competitive forces will yield the best allocation of our economic resources, the lowest prices, the highest quality and the greatest material progress." 356 U.S. 1, 4 (1958).

128. *Mitsubishi Motors Corp. v. Soler Chrysler-Plymouth, Inc.*, 473 U.S. 614 (1985); see also *The Sherman Antitrust Act*, LINFO, <http://www.lininfo.org/sherman.html> (last visited June 15, 2017) [hereinafter LINFO].

129. Kathryn Conde & Matthew Ritchie, *Antitrust Considerations*, in ADVISING A MASS. BUS., MASS. CONTINUING LEGAL EDUC. Ch. 11, § 11.2.1(a) (2011).

felony.”¹³⁰ This language creates three punishable offenses under the statute: (1) “monopolization,” (2) “attempted monopolization,” and (3) “conspiracy to monopolize.”¹³¹ Actions either by individual firms working alone, or multiple actors working in concert, may fall under Section 2’s prohibitions.¹³²

While the Sherman Act allows for both criminal and civil actions against a violator,¹³³ Section 2 is not often used for criminal prosecutions.¹³⁴ Nevertheless, prosecution may be warranted in circumstances involving particularly egregious behavior.¹³⁵ Most Section 2 concerns commence as civil actions, claiming harms suffered as a result of a firm’s allegedly illegal monopolistic behavior.¹³⁶ Such actions may be brought by the United States Government,¹³⁷ by competitors,¹³⁸ or

130. 15 U.S.C. § 2 (West 2004).

131. DOJ *Sherman Act*, supra note 3, at 5.

132. See, e.g., *United States v. Dunham Concrete Prod., Inc.*, 501 F.2d 80, 82–83 (5th Cir. 1974) (holding that the jury at the trial court level was correctly instructed that attempts to monopolize may be either concerted or unilateral action).

133. See Christopher Leslie, *Antitrust Law as Public Interest Law*, 2 U.C. IRVINE L. REV. 885, 888 (2012).

134. Wendy Wineholt et al., *Antitrust Violations*, 52 AM. CRIM. L. REV. 753, 786 (2015). Criminal prosecutions under the Sherman Act can only be brought by the United States Department of Justice (DOJ). *The Enforcers*, GUIDE TO ANTITRUST LAWS, FEDERAL TRADE COMMISSION, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/enforcers> (last visited June 15, 2017); see also FTC, *The Antitrust Laws*, supra note 127 (explaining that most actions under the Sherman Act are civil, with criminal prosecutions “typically limited to intentional and clear violations.”).

135. DEP’T. OF JUSTICE, AN ANTITRUST PRIMER FOR FEDERAL LAW ENFORCEMENT PERSONNEL (April 2005), <http://www.justice.gov/sites/default/files/atr/legacy/2015/03/06/209114.pdf>. The Department of Justice’s guide for antitrust enforcement personnel states that “[c]riminal prosecution is warranted . . . in circumstances where violence is used or threatened as a means of discouraging or eliminating competition,” for example, if organized crime is involved. *Id.* Otherwise, Section 2 violations “are generally not prosecuted criminally.” *Id.*

136. See Leslie, supra note 133, at 888 n.18 (“Both sections [1 and 2] of the Sherman Act are simultaneously civil and criminal statutes. . . . Section 2, however, has not been enforced through criminal prosecutions in years and few Section 1 violations are treated as criminal.”).

137. See, e.g., *United States v. Grinnell Corp.*, 384 U.S. 563 (1966) (civil suit brought by the United States against companies providing home security systems); *United States v. E. I. du Pont de Nemours & Co.*, 351 U.S. 377 (1956) (civil suit action under Section 2 of the Sherman Act for monopolizing, attempting to monopolize, and conspiracy to monopolize trade of cellophane and cellulose caps products); *Toys “R” Us, Inc. v. FTC*, 221 F.3d 928 (7th Cir. 2000) (civil suit brought by Federal Trade Commission against retailer of children’s toys for agreements with manufacturers that restrained competition); *United States v. Aluminum Co. of Am. (Alcoa)*, 148 F.2d 416 (2d Cir. 1945) (civil suit brought by the United States against aluminum manufacturers alleging monopolization of commerce of “virgin” aluminum ingot).

138. See, e.g., *Pac. Bell Telephone v. Linkline Comm., Inc.*, 555 U.S. 438 (2009) (civil suit under Section 2 of the Sherman Act, brought by internet service providers against existing telephone companies for predatory pricing related to the use of telephone-company-owned infrastructure necessary to provide DSL internet service); *Eastman Kodak Co. v. Image Technical Serv., Inc.*, 504 U.S. 451 (1992) (civil suit brought by independent service organizations against a

as class action suits by consumers.¹³⁹ Successful private plaintiffs may be awarded treble damages—an automatic tripling of monetary damages.¹⁴⁰ This incentivizes private parties to police monopolistic actors by way of civil actions.¹⁴¹

The Sherman Act was “broad and ambiguous,” encompassing a wide array of possible monopolistic practices and actions “considered to be detrimental to the interests of consumers and small business.”¹⁴² However, the Supreme Court has recognized that a violation of Section 2 requires (1) that a firm possess monopoly power and (2) that it intentionally behaves in such a way as to obtain, maintain, or expand such power.¹⁴³ The logical basis for a two-prong analysis is to avoid stifling innovation by punishing those firms that have obtained monopolies legally.¹⁴⁴ Monopolies can occur naturally as a result of a superior product, happenstance of changes in public taste and demand, or a company’s creation of a product before potential competitors.¹⁴⁵ The Supreme Court has maintained that it

manufacturer of electronic copy equipment for limiting the availability of parts for the service organizations, frustrating their ability to compete in the market of service of such equipment); *Broad. Music, Inc. v. Columbia Broad. Sys., Inc.*, 441 U.S. 1 (1979) (civil suit brought by a television network against agencies that licensed musical competitions for alleged price fixing); *Klor’s, Inc. v. Broadway-Hale Stores, Inc.*, 359 U.S. 207 (1959) (civil suit brought under Sections 1 and 2 of the Sherman Act by retail store against national manufacturers of household appliances, alleging conspiracies to monopolize and restrain the availability of products).

139. See, e.g., *Comcast Corp. v. Behrend*, 133 S. Ct. 1426 (2013) (cable television subscribers filed a class action antitrust suit under Sections 1 and 2 of the Sherman Act against a cable company for unlawful agreements and attempts to monopolize); *Blue Shield of Va. v. McCready*, 457 U.S. 465 (1982) (subscribers to a group health plan brought an action against the insurance company and a Virginia psychiatrists’ organization, alleging violations of Section 1 of the Sherman Act for agreements not to provide reimbursements for psychotherapy treatments performed by psychologists); *Ill. Brick Co. v. Illinois*, 431 U.S. 720 (1977) (the state of Illinois and local government entities brought a class-action suit against concrete block manufacturers for price fixing under Section 1 of the Sherman Act). Additionally, civil suits may be filed as *parens patriae* actions, under which a state attorney may file on behalf of consumers in that state. Leslie, *supra* note 133, at 889.

140. 15 U.S.C.A § 15 (1982). This trebling is allowed under Section 4 of the Clayton Act, which was enacted to strengthen the antitrust regulations. *Standing to Sue for Treble Damages under Section 4 of the Clayton Act*, 64 COLUM. L. REV. 570, 570–71 (1964).

¹⁴¹ See Leslie, *supra* note 133, at 889. The Supreme Court stated the purpose behind Congress’s decision to allow treble damages was that the “[e]very violation of the antitrust laws is a blow to the free-enterprise system envisaged by Congress.” *Hawaii v. Standard Oil Co. of Cal.*, 405 U.S. 251, 262 (1972). Thus, “[b]y offering potential litigants the prospect of a recovery in three times the amount of their damages, Congress encouraged these persons to serve as ‘private attorneys general.’” *Id.*

142. Bradley, *supra* note 127, at 738.

143. *United States v. Grinnell Corp.*, 384 U.S. 563, 570–71 (1966).

144. See *United States v. Aluminum Co. of America (Alcoa)*, 148 F.2d 416, 430 (2d Cir. 1945) (“The successful competitor, having been urged to compete, must not be turned upon when he wins.”).

145. See *id.* at 430. Under intellectual property laws, patents provide government-issued monopoly rights for a limited amount of time to the first to file and be awarded a patent for a new

is contrary to the public interest to punish this innovation.¹⁴⁶ It has also found it to be counterproductive to the goals of antitrust law.¹⁴⁷

The first prong of the two-pronged analysis requires that a firm possesses monopoly power, for which a one-hundred percent market share is not required.¹⁴⁸ Monopoly is commonly described as a “situation in which there is a single supplier or seller of a good or service for which there are no close substitutes.”¹⁴⁹ However, courts often have difficulty determining with precision whether this description fits a product produced by a particular firm.¹⁵⁰ Courts typically use a firm’s ability to control prices or output of a product as a proxy to determine the market power of the firm.¹⁵¹ While the percentage of the market occupied by a firm certainly contributes to such power, firms may be able to control prices while enjoying only a thirty percent market share or, in some instances, even less.¹⁵² Alternately, a high market share does not guarantee a firm the power to control prices or output.¹⁵³

Judge Learned Hand first suggested adding the second prong to the Sherman Act—that requiring intentional behavior—in *United States v. Aluminum*

invention. See 35 U.S.C.A §§ 1 *et seq.* For a brief overview of the U.S. Patent Act, 35 U.S.C. §§ 1 *et seq.*, see Sue A. Purvis, *Basics of Patent Protection*, http://www.uspto.gov/sites/default/files/about/offices/ous/Cooper_Union_20130604.pdf (last visited June 15, 2017).

146. See *Copperweld Corp. v. Independence Tube Corp.*, 467 U.S. 752, 767 (1984) (“[A]n efficient firm may capture unsatisfied customers from an inefficient rival, . . . [this] is precisely the sort of competition that promotes the consumer interests that the Sherman Act aims to foster.”).

147. See *Alcoa*, 148 F.2d at 430 (“In such cases a strong argument can be made that, although the result may expose the public to the evils of monopoly, the Act does not mean to condemn the resultant of those very forces which it is its prime object to foster: *finis opus coronat.*”).

148. See, e.g., *Am. Tobacco Co. v. United States*, 328 U.S. 781, 797 (1946) (finding that “two-thirds of the entire domestic field of cigarettes, and . . . over 80% of the field of comparable cigarettes” was a “substantial monopoly”).

149. LINFO, *supra* note 128.

150. See *United States v. E. I. du Pont de Nemours & Co.*, 351 U.S. 377, 387–94 (1956) (analyzing whether a firm possesses monopoly power).

151. *Id.* at 391 (defining monopoly power as “the power to control prices or exclude competition”).

152. See, e.g., *United States v. Am. Express Co.*, 88 F. Supp. 3d 143, 188 (E.D.N.Y. 2015), *rev’d*, 838 F.3d 179 (2d Cir. 2016) (holding in bench trial that a 26.4% share of the relevant “highly concentrated market with high barriers to entry” allowed American Express to “exercise uncommon leverage over their merchant-consumers . . .”). See also Melissa Lipman, *AmEx Shows Small Market Shares Carry Antitrust Risks*, LAW360 (Feb. 19, 2015, 7:40 PM), <http://www.law360.com/articles/623290/amex-shows-small-market-shares-carry-antitrust-risks> (“30 percent is often thought of as the baseline market share for a company to have market power in an antitrust analysis”).

153. Thomas G. Krattenmaker, Robert H. Lande & Steven C. Salop, *Monopoly Power and Market Power in Antitrust Law*, 76 GEO. L.J. 241, 259 (1987) (“[T]he theory of contestability shows that even a firm with a 100% market share may have no ability to raise price or collect monopoly profits under certain, albeit highly restrictive, circumstances.”).

Co. of America, commonly known as the *Alcoa* case.¹⁵⁴ In *Alcoa*, the court found that the firm's rapid expansion was sufficient to constitute an intentional anticompetitive act—that Alcoa's expansion was intended to stifle competition and obtain monopoly power.¹⁵⁵ Accordingly, the court deemed this sufficient to constitute anticompetitive behavior, and thus to subject Alcoa to antitrust liability.¹⁵⁶ Two decades later, in *United States v. Grinnell Corp.*, the Supreme Court explicitly adopted *Alcoa*'s intentional act requirement.¹⁵⁷

Since the addition of the second prong, the Supreme Court has held that any action that is “part of a scheme of willful acquisition or maintenance of monopoly power” is a violation of Section 2.¹⁵⁸ Ultimately, any intentional behavior by a monopoly that is harmful to consumers may be deemed a violation.¹⁵⁹ These acts may include behaviors such as tying necessary products or services together so they are unavailable to competitors in a related market.¹⁶⁰ They may also include a firm leveraging its monopoly power in one market to gain power in another market.¹⁶¹

Courts have repeatedly held that actions amounting to price fixing are generally intentionally anticompetitive and, thus, per se illegal under the Sherman Act.¹⁶² Price fixing, however, can take a number of forms, including a straightforward setting of a price that maximizes profits at the expense of consumers or setting an artificially low price that prevents competitors from

154. *United States v. Aluminum Co. of Am. (Alcoa)*, 148 F.2d 416, 429 (2d Cir. 1945) (“[S]ize does not determine guilt; that there must be some ‘exclusion’ of competitors; that the growth must be something else than ‘natural’ or ‘normal’; that there must be a ‘wrongful intent,’ or some other specific intent; or that some ‘unduly’ coercive means must be used.”).

155. *Id.*

156. *Id.*

157. *United States v. Grinnell Corp.*, 384 U.S. 563, 570–71 (1966) (“The offense of monopoly under § 2 of the Sherman Act has two elements: (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.”).

158. *Eastman Kodak Co. v. Image Technical Services, Inc.*, 504 U.S. 451, 483 (1992).

159. *Id.*

160. *See generally Eastman Kodak*, 504 U.S. 451.

161. *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 275 (2d Cir. 1979) (“It is clear that a firm may not employ its market position as a lever to create or attempt to create a monopoly in another market.”).

162. *See United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150 (1940) (“Agreements for price maintenance of articles moving in interstate commerce are, without more, unreasonable restraints within the meaning of the Sherman Act because they eliminate competition.” (quoting *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436, 458 (1940))). Price fixing is not, however, per se illegal under the Sherman Act, as certain types of price fixing are necessary to preserve consumer benefits in some industries. *See, e.g., Broad. Music, Inc. v. Columbia Broad. Sys., Inc.*, 441 U.S. 1, 21–23 (1979) (holding that while selling licensing rights of an entire library in a blanket deal was a literal form of price-fixing, it was not per se illegal because it created certain efficiencies that could not be otherwise reached). For a discussion of how such situations have been handled by the courts, see the discussion of exemptions, *infra* notes 255–68 and accompanying text.

entering a market.¹⁶³ For example, in *United States v. Apple Inc.*,¹⁶⁴ the Second Circuit held that a conspiracy book publishers and Apple to raise the prices of e-books, though done by Apple in an attempt to enter the e-book market as a competitor to Amazon, was an anticompetitive act in violation of the Sherman Act.¹⁶⁵ Similarly, in *United States v. Samsung Electronics Co.*,¹⁶⁶ Samsung pled guilty to price fixing in the form of agreements to limit the price of memory in computers.¹⁶⁷ Price fixing can occur either by agreement between multiple firms in violation of Section 1 of the Sherman Act, or by a single firm that holds monopoly power in violation of Section 2.¹⁶⁸

Another example of anticompetitive behavior is price squeezing.¹⁶⁹ Price squeezing can occur when a firm sells a product both to businesses as a wholesale-level distributor and directly to consumers at a retail level.¹⁷⁰ If the firm raises the wholesale prices to businesses, those businesses must in turn raise their retail prices to consumers in order to preserve their profit margins.¹⁷¹ If the badly behaving firm simultaneously lowers their prices to consumers at the retail level, this effectively “squeezes” their competition.¹⁷² The retail competitors must then choose between maintaining their prices, losing customers to their lower-priced competition, or lowering their prices to unprofitable levels.¹⁷³ Either of these options is likely to result in the competitor’s failure, and thus less competition and more profit for the badly behaving firm.¹⁷⁴

In addition to price fixing, there are a number of behaviors that firms may engage in that illegally thwart competition and are detrimental to consumer welfare.¹⁷⁵ Firms may form cartel agreements to achieve anticompetitive ends.¹⁷⁶ Under Section 1 of the Sherman Act, such agreements in restraint of trade are illegal or subject to civil penalties.¹⁷⁷ These behaviors may manifest as horizontal

163. See DOJ *Sherman Act*, *supra* note 3, at 49.

164. 791 F.3d 290 (2d Cir. 2015).

165. *Apple Inc.*, 791 F.3d at 327.

166. No. CR 05-0643PJH (N.D. Cal. Nov. 30, 2005).

167. *Samsung Electronics Co.*, No. CR 05-0643PJH, at 1, § 1.

168. See generally DOJ *Sherman Act*, *supra* note 3, at 49–76 (describing violations of Section 2 by either predatory pricing or predatory bidding).

169. See George A. Birrell, *The Integrated Company and the Price Squeeze under the Sherman Act and Section 2(a) of the Clayton Act, as Amended*, 32 NOTRE DAME L. REV. 5, 6 (1956).

170. *Id.* at 7–11.

171. *Id.*

172. *Id.*

173. *Id.*

174. *Id.*

175. See DOJ *Sherman Act*, *supra* note 3, at 77–140 (discussing behaviors such as tying, product discounts, refusing to deal with rivals, and exclusive dealing).

176. See Joseph N. Eckhardt & Andrea L. Hamilton, *US Antitrust Law: Unreasonable Restraints of Trade under Section 1 of the Sherman Act*, COMP LAW 259 (2003).

177. 15 U.S.C. § 1 (2012); see also Eckhardt & Hamilton, *supra* note 177, at 260–61 (discussing that a per se analysis is typically applied to restraints of trade that are designed to divide markets).

agreements between competitors, intended to either keep prices or output at levels that are the most profitable for all involved, or to keep additional competition out of the market.¹⁷⁸ Such agreements may also take the form of exclusive agreements of a vertical nature, involving agreements of one firm to either buy or sell only the products of another.¹⁷⁹ Alternatively, these agreements may take the form of a “hub and spoke,” in which one firm (the hub) establishes vertical agreements with multiple other firms (the spokes), which produces effects similar to that produced by firms engaging in horizontal agreements and is likewise utilized to restrain trade.¹⁸⁰

Conversely, the courts have held that some morally undesirable actions do not always rise to the level of an exclusionary act in a legal sense.¹⁸¹ For example, a firm’s refusal to assist competitors is one of the most widely recognized actions to be undesirable for competition, but is not a violation of antitrust law.¹⁸² The Supreme Court has stated that there is generally no duty on the part of a firm to assist competitors.¹⁸³ However, narrow conditions may exist where the courts will impose a duty.¹⁸⁴ For instance, antitrust liability may exist where a firm ends a relationship with a competitor with the intent of gaining monopoly power.¹⁸⁵

178. *See, e.g.*, *Fashion Originators’ Guild of Am. v. Fed. Trade Comm’n*, 312 U.S. 457 (1941) (holding that a group agreement amongst competing fashion designers, manufacturers, and other members of the fashion industry to attempt to destroy companies producing and selling knock-off brands was in violation of the Sherman Act).

179. *See, e.g.*, *United States v. Gen. Elec. Co.*, No. CV 96-121-M-CCL, 1997 WL 269491, at *1 (D. Mont. Mar. 18, 1997) (denying defendant’s motion to dismiss and finding that licensing between medical equipment manufacturer and hospitals that prevented hospitals from competing in the service of medical equipment may be in violation of the Sherman Act).

180. *See, e.g.*, *Toys “R” Us, Inc. v. Fed. Trade Comm’n*, 221 F.3d 928 (7th Cir. 2000) (affirming FTC’s determination that the toy retail chain was the central player in a horizontal conspiracy to restrain the output of toy manufacturers to other retail chains, thus creating a vertical restraint on competing retailers).

181. For discussion of exclusionary acts, see *supra* notes 154–60 and accompanying text.

182. *Single Firm Conduct: Refusal to Deal*, FEDERAL TRADE COMMISSION (last visited June 15, 2017), <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/single-firm-conduct/refusal-deal> (“In general, a firm has no duty to deal with its competitors. In fact, imposing obligations on a firm to do business with its rivals is at odds with other antitrust rules that discourage agreements among competitors that may unreasonably restrict competition.”).

183. *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 600 (1985) (“[E]ven a firm with monopoly power has no general duty to engage in a joint marketing program with a competitor.”).

184. Geoffrey A. Manne & Joshua D. Wright, *If Search Neutrality Is the Answer, What’s the Question?*, 2012 COLUM. BUS. L. REV. 151, 191–93 (2012).

185. *See Aspen Skiing Co.*, 472 U.S. at 600–04 (holding that the discontinuation of a joint venture without a valid business reason violated Sherman Act § 2).

2. The Scope of Analysis: The Relevant Market

In any Section 2 case, a threshold question must be answered: what is the relevant market of the alleged monopolistic conduct?¹⁸⁶ Without first determining the market, it is impossible to determine what market share a particular firm holds, what barriers to entry exist against new competitors entering that market, whether alternatives exist for consumers, or the most basic question of whether consumers are being harmed by conduct within that market.¹⁸⁷ However, determining the market is often not easy.¹⁸⁸ Courts consider a number of factors when determining the relevant market in which a firm operates.¹⁸⁹ When applying such factors to the Internet, there are several unique factors that complicate this analysis.¹⁹⁰

a. *Defining the Relevant Market*

When applying an antitrust analysis to the behavior of a firm within an industry, the courts must first answer a threshold question of what the relevant market is in which the firm operates.¹⁹¹ First, courts must determine the firm's product or service.¹⁹² Then, the courts must determine what geographic market is most relevant to the firm's operations and how willing and able consumers are to switch to another firm's product or service.¹⁹³ These factors help the court to approximate the product or service's cross-elasticity of demand, meaning the likelihood that a consumer will switch to a substitute product or service if the firm

186. Conde & Ritchie, *supra* note 129, § 11.5.1.

187. See *supra* notes 148–53 and accompanying text for an overview of how market share is generally used in an antitrust analysis.

188. See *infra* Part II.B.2.a for an overview of how the relevant market is determined.

189. See *infra* Part II.B.2.a for an overview of the factors that are considered.

190. See *infra* Part II.B.2.b for an overview of how the Internet differs from traditional industries for purposes of an antitrust analysis.

191. Conde & Ritchie, *supra* note 129, § 11.5.1.; see also *United States v. Grinnell Corp.*, 384 U.S. 563, 586 (1966) (“[T]he kindred definition of the ‘line of commerce’ is fundamental. We must define the area of commerce that is allegedly engrossed before we can determine its engrossment; and we must define it before a decree can be shaped to deal with the consequences of the monopoly, and to restore or produce competition.”).

192. *Id.* For a discussion of how the consumer is used in an antitrust analysis, see *infra* notes 192–200 and accompanying text.

193. *Id.* This is known as cross-elasticity of demand. See *Grinnell Corp.*, 384 U.S. at 592–93. It can be defined as “[p]roportionate change in the demand for one item in response to a change in the price of another item. It is ‘positive’ where the two items are mutual substitutes, and any increase in the price of one . . . will increase the demand for the other It is ‘negative’ when the items are complementary and any increase in the price of one . . . will decrease the demand for the other.” *Cross-Elasticity of Demand*, BUSINESSDICTIONARY, <http://www.businessdictionary.com/definition/cross-elasticity-of-demand.html> (last visited June 15, 2017).

instituted a small but significant change in price.¹⁹⁴ If consumers would likely change to an alternate product or service as a result of a change in price, the products are generally considered to be in the same market.¹⁹⁵ Likewise, if consumers would be willing to obtain the product or service from another geographic area in response, then the locations may be considered as part of the same geographic market.¹⁹⁶

The cross-elasticity component of a market analysis looks very different depending on the industry in question.¹⁹⁷ For example, in *United States v. Grinnell Corp.*,¹⁹⁸ the Supreme Court focused on the market for home alarm systems and held that various combinations of fire, burglar, and other home alarms were effectively interchangeable.¹⁹⁹ Thus, the relevant market for an antitrust analysis was all accredited property protection services routed through central service systems.²⁰⁰ In another example, *Jefferson Parish Hospital District No. 2 v. Hyde*,²⁰¹ the Supreme Court focused more on the geographic market as the more relevant criterion in determining the market in which hospitals operated.²⁰² There, the Court held the relevant market was not the full New Orleans metropolitan area but a more localized one, as patients were likely to go to the closest hospital.²⁰³ Once the relevant market is defined, a court can determine a firm's share of the market and its ability to act in an anticompetitive manner.²⁰⁴

b. *Defining the Scope of the Internet Market*

In addition to disagreement among experts in how to define the relevant search market, there are several factors about search engines that complicate an antitrust analysis of their behavior.²⁰⁵ Experts disagree on whether a free product like search can constitute a market, how a lack of geographic borders impacts an antitrust analysis of search, and how cross-elasticity of demand is assessed when

194. *Grinnell Corp.*, 384 U.S. at 394–95 (citing *United States v. E. I. du Pont de Nemours & Co.*, 351 U.S. 377, 394–95 (1956)).

195. *Conde & Ritchie*, *supra* note 129, § 11.5.1.

196. *Id.*

197. *See Grinnell Corp.*, 384 U.S. at 593 (explaining that the Court should define the relevant market in an antitrust analysis to include all alternatives which, “in light of geographic availability, price and use characteristics, are in realistic rivalry” for some or all of the business in question.); *City of New York v. Grp. Health Inc.*, 649 F.3d 151, 155–56 (2d Cir. 2011) (internal quotations omitted) (stating that a definition of the relevant market must include “all products reasonably interchangeable by consumers for the same purposes”).

198. 384 U.S. 563 (1966).

199. *Grinnell Corp.*, 384 U.S. at 572–73.

200. *Id.*

201. 466 U.S. 2 (1984).

202. *Jefferson Parish*, 466 U.S. at 26–27.

203. *Id.*

204. *See Grinnell Corp.*, 384 U.S. at 586.

205. For a discussion of these factors, see *infra* notes 209–28 and accompanying text.

users can switch between the offerings of competitors instantaneously.²⁰⁶ Additionally, experts disagree on what other products should be included in a relevant market.²⁰⁷

The law is unsettled on whether services or products, offered for free, constitute a relevant market.²⁰⁸ There is no case law on this, but courts and government agencies have suggested that if a free service exists in a two-sided market where one side generates revenue, a relevant market may be found.²⁰⁹ In the search engine market, such a two-sided market exists, with the free search service offered to consumers on one side and the paid ads purchased by advertisers on the other.²¹⁰

For Internet-based businesses, there is debate on how to determine relevant markets. Since the Internet essentially erases geographical borders to commerce, the geographic market is generally straightforward and consists of the full United States.²¹¹ However, this would not include truly localized companies conducting business online, such as retail stores that sell goods only at their physical location but list their basic business information online.²¹² However, the simplicity is negated by intense disagreements on what products are interchangeable.²¹³ Some scholars believe that the relevant market is all online search, while others believe it is only specialized search or horizontal search.²¹⁴ Still others argue it should be a broader market of all forms of online advertising, or even all advertising media, including traditional media such as print.²¹⁵

When attempting to determine the relevant market for Google's search engine, there is no clearly preferred approach used by experts.²¹⁶ Especially in

206. For a discussion of the debate among experts, see *infra* notes 217–28; see also Langford, *supra* note 36, at 1570. For a discussion of cross-elasticity of demand, see *supra* notes 194–204 and accompanying text.

207. For a discussion about the debate of what products should be included in a relevant market for search engines, see *infra* notes 215–17 and accompanying text.

208. Langford, *supra* note 36, at 1570.

209. *Id.*

210. See Mark R. Patterson, *Google and Search-Engine Market Power*, HARV. J.L. & TECH., July 2013, at 16, http://ir.lawnet.fordham.edu/cgi/viewcontent.cgi?article=1514&context=faculty_scholarship (“Google operates in a two-sided market: . . . the two classes are searches and advertisers”).

211. Langford, *supra* note 36, at 1572. As courts within the United States will generally be focused on the application of U.S. antitrust law, while an international market may be more accurate, the relevant market for the application of the law will generally be limited to a national level. *Id.*

212. *Id.* at 1572.

213. See, e.g., Bruce Abramson, *Are “Online Markets” Real and Relevant? From the Monster-HotJobs Merger to the Google-DoubleClick Merger*, 4 J. COMPETITION L. & ECON. 655 (2008); Ratliff & Rubinfeld, *supra* note 75.

214. See Houck, *supra* note 91.

215. Langford, *supra* note 36, at 1570–71.

216. See *id.* at 1568 (“[T]he scope of the relevant market for search engines is vigorously debated, and Google itself has argued the market is so broad that it encompasses virtually any means of searching for information.”).

light of the disagreement on the relevant customer base, this question has no clear answer.²¹⁷ Some have argued that horizontal search is the most relevant market.²¹⁸ However, it has also been argued that Google's search engine should be analyzed specifically in reference to the advertising that it displays, as this is Google's primary source of revenue.²¹⁹ At least once, a court determined that Google's search results cannot be a relevant market at all because they are free to consumers.²²⁰

A simpler, and generally accepted approach among scholars, is to avoid this issue by identifying Google as a multisided platform.²²¹ In a multisided platform, the business serves two or more groups of consumers.²²² Each group of consumers is potentially willing to pay for a product, and each group depends on the other group to provide for the product.²²³ With Google, users consume search results, which include paid advertising.²²⁴ Advertisers consume the views and clicks of the users.²²⁵ While Google does not earn any money from the user side of this platform, it recoups the cost of providing search results for free by making money from advertisers.²²⁶ More importantly, if the demands of one set of consumers were to change, the other would necessarily be impacted.²²⁷ Ultimately, attempting to determine the relevant market in the abstract, without a specific set of facts of a suspected intentional anticompetitive act, does not yield a clear answer.

3. To Have, But to Hold? The Stability (or Not) of Market Power Online

Another way in which the Internet differs from traditional industries is a lack of market stability.²²⁸ In a traditional industry, monopoly power in a relatively stable market can make it impossible for new competition to enter.²²⁹ One of the many consumer protection functions of antitrust is to ensure competition thrives by thwarting behaviors that increase stability or barriers to

217. *Id.* For discussion of a commonly used approach, see *infra* notes 222–29 and accompanying text.

218. Langford, *supra* note 36, at 1568.

219. See *id.* at 1570–71; Lastowka, *supra* note 21, at 1331.

220. *Kinderstart.com, LLC v. Google, Inc.*, 2007 WL 831806 (N. D. Cal. 2007) (granting summary judgment in favor of Google partly because it found that a free product cannot constitute a relevant market for an antitrust analysis).

221. See, e.g., David S. Evans, *The Antitrust Economics of Free*, 7 COMPETITION POL'Y INT'L 71, 75 (2011); Langford, *supra* note 36, at 1568.

222. Evans, *supra* note 222, at 75.

223. *Id.*

224. *Id.*

225. *Id.*

226. *Id.*

227. *Id.*

228. See Langford, *supra* note 36, at 1576; Houck, *supra* note 91.

229. See DOJ *Sherman Act*, *supra* note 3, at 14.

entry into the market.²³⁰ This Part introduces the factors that weigh on market stability in traditional markets, such as switching costs to consumers, the speed of entry for competitors, and sunk costs incurred by attempts to enter the market that may deter competition. It then discusses how these aspects look different online, particularly for search engines and similar technology.

Establishing an antitrust claim against a firm for monopolization generally requires that barriers to entry exist in the market, protecting a monopolist from the emergence of new competition.²³¹ Unless a firm's market power persists over time, its power is not a concern as it is unlikely the firm will have the opportunity to harm competition.²³² The Supreme Court has referenced the importance of analyzing barriers to entry in a number of cases, but the Court has never provided an explicit statement of what constitutes a barrier to entry for purposes of an antitrust analysis.²³³ A widely accepted definition of a barrier to entry in a market, however, is "a cost that must be incurred by new entrants that incumbents do not or have not had to bear."²³⁴

Entry barriers are difficult to measure, particularly online.²³⁵ One notable difference when dealing with search engines is the lack of cost to consumers to switch products. Experts have pointed out that all it takes for users to switch is simply typing a different URL on their browsers.²³⁶ Additionally, there is no

230. See *id.* For a discussion of barriers to entry generally, see *infra* notes 332–35 and accompanying text.

231. *The Market Realities That Undermine the Antitrust Case Against Google*, INT'L CTR. FOR LAW & ECON., <http://laweconcenter.org/component/content/article/94-the-market-realities-that-undermine-the-antitrust-case-against-google.html> (last visited June 15, 2017); see also *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 591 n.15 (1986) (stating that if a party wants to prove that entry into a particular market is difficult, there must be barriers to entry that would maintain a firm's supracompetitive prices over time).

232. *Houck*, *supra* note 91; see also *Rebel Oil Co. v. Atl. Richfield Co.*, 51 F.3d 1421, 1439 (9th Cir. 1995) ("A mere showing of substantial or even dominant market share alone cannot establish market power sufficient to carry out a predatory scheme. The plaintiff must show that new rivals are barred from entering the market and show that existing competitors lack the capacity to expand their output to challenge the predator's high price.").

233. Daniel E. Lazaroff, *Entry Barriers and Contemporary Antitrust Litigation*, 7 U.C. DAVIS BUS. L.J. 1 (2006). For an in-depth analysis of various behaviors that may be barriers to entry in a market, see Dennis W. Carlton, *Barriers to Entry*, 1 ISSUES IN COMPETITION L. & POL'Y 601 (2008), http://www.appliedantitrust.com/09_merger_guidelines/07_supp/carlton_barriers_entry2008.pdf; R. Preston McAfee, Hugo M. Mialon & Michael A. Williams, *Economic and Antitrust Barriers to Entry* (2003), <http://vita.mcafee.cc/PDF/Barriers2Entry.pdf>.

234. John D. Culbertson & Roy Weinstein, *Antitrust Aspects of Barriers to Entry* (2004), http://www.micronomics.com/articles/UCLA_Law_Institute_Barriers_to_Entry_Final.pdf.

235. *Hand*, *supra* note 99.

236. Langford, *supra* note 36, at 1577; see also *Houck*, *supra* note 91 ("Google's practices . . . do not prevent consumers from switching to rival products. On the contrary, consumers can switch to competing search engines or other websites easily, instantaneously and cost-free."); Int'l Ctr. for Law & Econ., *supra* note 232 ("In Google's case, the barriers alleged are illusory; competition is, in many ways, really 'one click away.'").

charge to consumers to switch to Google, or to switch to any other well-known search engine.²³⁷ Switching costs are equally not prohibitive for advertisers in an auction-based pricing system.²³⁸ Google does not ultimately set advertising prices—the market does.²³⁹ Thus, switching to or from Google is not restricted by cost, as advertisers can theoretically control this factor themselves.²⁴⁰

Another barrier to entry that is frequently considered is sunk costs, which are costs incurred before a firm can begin to make money.²⁴¹ In the context of search engines, sunk costs take the form of the initial investment in product development and infrastructure.²⁴² Additionally, a substantial cost may be incurred in developing a search algorithm.²⁴³ As the business model for search relies on advertising revenue, a competitor must attract sufficient users who will see the ads in order to recover sunk costs.²⁴⁴ A common critique of Google is that it has immense amounts of data that new search engines cannot match.²⁴⁵

For each potential barrier to entry created by Google, experts have formulated a response. Regarding the speed at which companies can thrive online, it is nearly instant in comparison to traditional markets.²⁴⁶ While the extensive amount of data used to formulate Google's search results is unknown to competitors, other search engines have been able to obtain sufficient data to create their own programs.²⁴⁷ Additionally, "data can be bought; there's plenty out there, and lots of it is for sale."²⁴⁸ Experts have pointed out that requirements for another firm to spend the same time and money to enter the market that Google itself once did does not constitute a barrier to entry.²⁴⁹

In addition to lower barriers to entry online generally, Google is not able to directly exclude competitors.²⁵⁰ Google is unable to control what appears online, including competitors that may threaten its success.²⁵¹ Google additionally

237. Langford, *supra* note 36, at 1577.

238. *Id.*

239. *Id.*

240. *Id.*

241. See generally Andrew N. Kleit & Malcolm B. Coate, *Are Judges Smarter than Economists? Sunk Costs, the Threat of Entry and the Competitive Process*, (FED. TRADE COMM'N, Working Paper No. 190, 1991), <https://www.ftc.gov/sites/default/files/documents/reports/are-judges-smarter-economists-sunk-costs-threat-entry-and-competitive-process/wp190.pdf>.

242. Langford, *supra* note 36, at 1575.

243. *Id.*

244. *Id.*

245. Int'l Ctr. for Law & Econ., *supra* note 232.

246. See David Balto, *In Antitrust Probe, Google's Critics Have it Wrong*, HUFFINGTON POST: THE BLOG (Aug. 24, 2011), http://www.huffingtonpost.com/david-balto/post_2155_b_884283.html (pointing out that when Google first appeared, it overcame Yahoo!'s substantial lead in the search market within a year).

247. Hand, *supra* note 99.

248. Int'l Ctr. for Law & Econ., *supra* note 232.

249. *Id.* ("[I]t's no barrier to entry for challenging firms to have to spend the same (or, in this case, almost certainly less) money Google did in order to replicate its success.")

250. Langford, *supra* note 36, at 1577.

251. *Id.*

cannot control the ability of users to leave or find content elsewhere.²⁵² Google's users may use other search engines, or even find content on the web through other means entirely, such as directly entering a URL or through social media.²⁵³ Scholars have recognized there is no evidence that lasting control is possible in the market of search engines.²⁵⁴ Rather, "[t]he notion of a durable monopoly in this evolving and uncertain environment is fanciful."²⁵⁵

C. *Antitrust's Evolution and Exceptions*

As industries have evolved and emerged, courts have found the Sherman Act is not equally applicable to all situations.²⁵⁶ In the past, the courts created work-arounds to handle inapplicability to some industries or scenarios, moving from an initial per se application of the Sherman Act to a reasonableness standard.²⁵⁷

Due to differences in industries, circumstances exist where a per se application of the Sherman Act would thwart activity that is actually beneficial to consumers.²⁵⁸ The primary focus of antitrust law, as previously stated, is consumer welfare.²⁵⁹ Accordingly, courts have created exemptions to Sherman Act liability for such beneficial behaviors.²⁶⁰ While courts initially applied the

252. *Id.*

253. *Id.*

254. *See id.* at 1576 (pointing out that Yahoo!'s former dominance that was displaced rapidly by Google shows a lack of market stability); Houck, *supra* note 91 (pointing to Google's constant innovation as evidence that Google itself perceives its market share as not stable); Int'l Ctr. for Law & Econ., *supra* note 232 (pointing out that when new devices are introduced that can access the Internet, "[e]very one of these is a challenge to Google's (and every other player's) business model and revenue stream.").

255. Int'l Ctr. for Law & Econ., *supra* note 232.

256. *See* Richard A. Epstein, *Monopolization Follies: The Dangers of Structural Remedies under Section 2 of the Sherman Act*, 76 ANTITRUST L.J. 205, 237 (2009) (discussing how several different cases applied Section 2 in varying ways). For an overview of how the Sherman Act is generally applied by courts, *see supra* Section II.B.1.

257. *See, e.g.,* NCAA v. Bd. of Regents of Univ. of Okla., 468 U.S. 85, 98 (1984) ("[T]he challenged practices of the NCAA constitute a 'restraint of trade' in the sense that they limit members' freedom to negotiate and enter into their own television contracts. In that sense, however, every contract is a restraint of trade, and as we have repeatedly recognized, the Sherman Act was intended to prohibit only unreasonable restraints of trade."). *See* Epstein, *supra* note 257. In addition to judicially created exceptions, Congress has created several legislative exceptions. *E.g.,* 15 U.S.C. § 17 (1914) (creating an antitrust exemption for labor unions). These will not be discussed in this paper.

258. *E.g.,* Leegin Creative Leather Prods. v. PSKS, Inc., 551 U.S. 877, 905–07 (2007) (holding that a finding of per se illegality for vertical price fixing is not justified for a minimum price with procompetitive justifications); State Oil Co. v. Khan, 522 U.S. 3, 20–22 (1997) (holding that vertical price fixing of a maximum price is not necessarily anticompetitive and should be evaluated under a rule of reason).

259. *See supra* note 123 and accompanying text.

260. *See infra* note 258.

Sherman Act as a *per se* rule, the analysis used in some industries became more complex over time.²⁶¹

In the area of price fixing, for example, a “rule of reason” analysis emerged not long after Congress enacted the Sherman Act.²⁶² In *Chicago Board of Trade v. United States*, the Chicago Board of Trade adopted a “call rule” that prohibited members from purchasing grain at any price other than the closing bid call for the day after closing occurred.²⁶³ On its face, this fixed the price and thus violated Section 1 of the Sherman Act.²⁶⁴ However, the Court found the call rule was enacted not to prevent competition, but to make business more convenient for members by (1) cutting back the hours required to engage in business to remain competitive, and (2) to break up a monopoly formed amongst a few warehousemen.²⁶⁵ As the purpose and effect of this rule were in line with the goals of the Sherman Act, the Court determined that a *per se* application of illegality was not appropriate.²⁶⁶ The Court determined that the “reasonableness” of the actions of a firm should be considered in such circumstances where an anticompetitive intent was not clearly present.²⁶⁷ The Court outlined the following items to consider in such an analysis: (1) the nature of the price-fixing, (2) the scope of the price-fixing, and (3) the effects of the price-fixing.²⁶⁸

Courts apply the “rule of reason” approach to other situations in which restrictions on price or output occur, but may not be anticompetitive.²⁶⁹ In situations where consumers have the option to pay a fixed price or purchase the product through an alternative pricing scheme, the Court has held there is no violation of the Sherman Act.²⁷⁰ Additionally, courts have carved out exceptions

261. See *NCAA*, 468 U.S. at 100–01 (“[A] *per se* rule is applied when ‘the practice facially appears to be one that would always or almost always tend to restrict competition and decrease output.’ In such circumstances a restraint is presumed unreasonable without inquiry into the particular market context in which it is found. Nevertheless, we have decided that it would be inappropriate to apply a *per se* rule to this case . . . [W]hat is critical is that this case involves an industry in which horizontal restraints on competition are essential if the product is to be available at all.” (citation omitted) (quoting *Broad. Music, Inc. v. Columbia Broad. Sys., Inc.*, 441 U.S. 1, 19–20 (1979)))

262. See *Chicago Bd. of Trade v. United States*, 246 U.S. 231, 239 (1918).

263. *Id.* at 237.

264. *Id.* at 237–39.

265. *Id.* at 237–41.

266. *Id.* at 238 (“But the legality of an agreement or regulation cannot be determined by so simple a test, as whether it restrains competition. Every agreement concerning trade, every regulation of trade, restrains. To bind, to restrain, is of their very essence. The true test of legality is whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition.”).

267. *Id.*

268. *Id.* at 239–40.

269. See, e.g., *Broad. Music, Inc. v. Columbia Broad. Sys., Inc.*, 441 U.S. 1, 23–25 (1979) (holding that blanket user licensing agreements for copyrighted musical compositions were not *per se* illegal but should be examined under the rule of reason).

270. Compare *Columbia Broad. Sys., Inc. v. Am. Soc’y of Composers, Authors & Publishers*, 620 F.2d 930, 935–36 (2d Cir. 1980) (holding that the use of blanket agreements was

where the fixing of the price of goods or services may have consumer-friendly justifications, including social welfare and nonprofit organization, and sports.²⁷¹

In areas where Congress deemed insulation from antitrust liability necessary, it also created exemptions.²⁷² For example, several exemptions were created under the Clayton Act, which was enacted to work with the Sherman Act and strengthen antitrust law.²⁷³ The Clayton Act included an exemption for labor unions, declaring that collective bargaining does not constitute anticompetitive behavior.²⁷⁴ Similarly, agriculture cooperatives are protected under the Capper-Volstead Act.²⁷⁵ Other industries, such as healthcare insurance, are exempted from standard Sherman Act treatment by legislation that accounts for the specialized needs of those industries.²⁷⁶

II. DISCUSSION

The Sherman Act is outdated for purposes of attempting to regulate search engines. However, it is still applicable to industries that use business models

not a restraint of trade because alternatives to acquiring the rights to individual products existed), *with Virginia Excelsior Mills, Inc. v. F.T.C.*, 256 F.2d 538 (4th Cir. 1958) (holding that price-fixing through a common sales agent was a violation of antitrust laws because no alternative was made available to consumers).

271. *See, e.g.*, *NAACP v. Claiborne Hardware Co.*, 458 U.S. 886, 913–14 (1982) (holding that there was no basis on imposing liability for a boycott by a civil rights organization); *United States v. Brown Univ.*, 5 F.3d 658 (3d Cir. 1993) (holding that a rule of reason analysis was necessary for student aid scheme in light of the case regarding higher education). Professional baseball is exempt from antitrust law. *Fed. Baseball Club of Balt. v. Nat'l League*, 259 U.S. 200, 207–09 (1922). Additionally, the Supreme Court held collegiate athletics are exempt from antitrust liability because the structure of their market cannot exist without restrictions on broadcasting. *NCAA v. Bd. of Regents of Univ. of Okla.*, 468 U.S. 85, 100–01 (1984).

272. *See infra* notes 275–78 and accompanying text.

273. 15 U.S.C. §§ 12-27 (1914).

274. *Id.* § 17 (“The labor of a human being is not a commodity or article of commerce. Nothing contained in the antitrust laws shall be construed to forbid the existence and operation of labor, agricultural, or horticultural organizations, instituted for the purposes of mutual help, and not having capital stock or conducted for profit, or to forbid or restrain individual members of such organizations from lawfully carrying out the legitimate objects thereof; nor shall such organizations, or the members thereof, be held or construed to be illegal combinations or conspiracies in restraint of trade, under the antitrust laws.”).

275. 7 U.S.C. § 291 (1922).

276. 15 U.S.C. § 1012 (1947). The McCarran-Ferguson Act of 1945 dictates that certain activities of healthcare insurance are subject to state law, and is thus interpreted to immunize these activities from federal antitrust regulation. *Id.* (“The business of insurance, and every person engaged therein, shall be subject to the laws of the several States which relate to the regulation or taxation of such business.”); *see also Hartford Fire Ins. Co. v. California*, 509 U.S. 764, 781 (1993) (interpreting the language “the business of insurance” in Section 2(b) of the McCarran-Ferguson Act to mean the transactions of insurance companies, rather than the companies themselves).

similar to those used at the time of its enactment.²⁷⁷ The Sherman Act is not a good fit for newer industries, but antitrust regulation is still needed for consumer protection.²⁷⁸ As such, a new statutory framework is needed.

To provide the necessary flexibility to handle new and evolving industries, an industry-specific framework should be enacted.²⁷⁹ Intellectual property law, which includes several doctrines tailored to fit particular needs but connected by one unifying purpose, provides an instructive framework on which Congress should model such a new statutory framework.²⁸⁰ A divided framework would allow for an individualized statutory framework and unique handling of Internet businesses.²⁸¹ Under such a proposed new system, courts would have the flexibility to allow Google the freedom to act in a manner that benefits consumers.²⁸² Additionally, such a new framework would allow courts to step in to halt Google's actions if they ever lead to anticompetitive harms that outweigh consumer benefits.²⁸³

A. *Competition is Good, But Chaos is Not: Why We Still Need Antitrust*

Though the Sherman Act may not be a workable option for combatting anticompetitive actions in Internet companies, it is still applicable for traditional industries.²⁸⁴ Additionally, the general purpose of antitrust law is still applicable for all industries.²⁸⁵ Consumers are still consuming, so there is still a need for their protection as they do so. While antitrust generally is still needed, the Sherman Act as a specific framework is outdated.²⁸⁶

The Act predates much of the current technology, and thus many of the related industries, that operate in the world today.²⁸⁷ When the Act was enacted in 1890, the United States was in the midst of a massive expansion of its industries,

277. See *infra* notes 297–99 and accompanying text for discussion of the industries for which the Sherman Act is still a useful framework.

278. See *infra* notes 300–08 and accompanying text for discussion of why the Sherman Act does not apply well to newer industries and why antitrust regulation is necessary generally.

279. See *infra* Part III.B for discussion of a proposed industry-specific framework.

280. See *infra* notes 316–42 and accompanying text for discussion of how intellectual property provides useful guidance for a proposed framework.

281. See *infra* Part III.C for a proposal of how the Internet industry should be analyzed under an industry-specific antitrust framework.

282. See *infra* Part III.D for discussion of how the proposed new framework would apply to Google.

283. See *infra* Part III.D for discussion of how the proposed new framework would apply to Google.

284. For discussion of why the Sherman Act is inapplicable to Internet companies, see *infra* notes 302–309 and accompanying text.

285. For discussion of the purpose of the Sherman Act, see *supra* note 127 and accompanying text.

286. For discussion of an analysis under the Sherman Act, see *supra* Part II.B.1.

287. See *infra* note 290 and accompanying text.

which were primarily manufacturing, agriculture, and railroads.²⁸⁸ Since the Sherman Act's enactment, the advent of airplanes has drastically increased the globalization of commerce.²⁸⁹ Changes in communication technology have also altered the development of commerce as we increasingly rely on computers and the Internet.²⁹⁰ As the first home Internet connection came a century after the Sherman Act was enacted, it's impossible to fathom that the drafters imagined the state of commerce as it exists today.²⁹¹

Regardless of the possible legislative intent that existed at the time of its enactment, the Sherman Act has since been used as a consumer protection statute.²⁹² Although commerce has evolved, many of the same concerns regarding consumer protection remain.²⁹³ Cartelization, price fixing, horizontal agreements, and other anticompetitive behaviors are still possible, and the Sherman Act is still competent to address these issues in traditional industries.²⁹⁴ Even some industries

288. Sherman Act, 15 U.S.C. § 2 (1890); Richard White, *The Rise of Industrial America, 1877–1900*, GILDER LEHRMAN INST. OF AM. HIST., <https://www.gilderlehrman.org/history-by-era/essays/rise-industrial-america-1877-1900> (last visited June 15, 2017).

289. The Sherman Act predates the Wright brothers' invention of the airplane by more than a decade. *The Wright Brothers: The Invention of the Aerial Age*, SMITHSONIAN NAT'L AIR & SPACE MUSEUM (last visited June 15, 2017) <https://airandspace.si.edu/exhibitions/wright-brothers/online/fly/1903/>.

290. The first PC is thought to have been the Kenbak-1, created by John Blakenbaker in 1971. Comput. History Museum, *What Was the First PC?*, <http://www.computerhistory.org/revolution/personal-computers/17/297> (last visited June 15, 2017). The first recorded description of a networking system for social interaction was written by J.C.R. Licklider in 1962. Barry M. Leiner et al., *Brief History of the Internet*, INTERNET SOC'Y, <http://www.internetsociety.org/internet/what-internet/history-internet/brief-history-internet> (last visited June 15, 2017). A National Research Council Committee produced a report in 1988 titled "Towards a National Research Network," which influenced what we know as the Internet today. *Id.* The term "Internet" was not officially defined until October 24, 1995, when the Federal Networking Council passed a resolution addressing the issue. *Id.*

291. See HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE* (4th ed. West 2011). Most of what is known of the legislative history of the Sherman Act is merely speculative. *Id.* While there are no specific statements of whether or not the drafters envisioned a globalized economy, it is unlikely they were able to predict the extent to which such an economy now exists. *Id.*

292. See FTC, *The Antitrust Laws*, *supra* note 127.

293. See, e.g., *Addyston Pipe & Steel Co. v. United States*, 175 U.S. 211 (1899) (holding that an agreement between six corporations not to compete in the manufacture and sale of cast-iron pipe unreasonably raised prices and had a direct effect on interstate commerce); *In re Steel Antitrust Litigation*, No. 08 C 5214, 2015 WL 5304629, at *12 (N.D. Ill. Sept. 9, 2015) (certifying class for the purpose of determining whether defendant corporations engaged in a conspiracy to reduce production of steel and raise prices of steel goods in violation of the Sherman Act).

294. See, e.g., *Information, United States v. JPMorgan Chase & Co.* (D. Conn., 2015) (No. 3:15-cr-00079-SRU), <http://www.justice.gov/sites/default/files/atr/legacy/2015/05/27/314485.pdf> (alleging that JP Morgan Chase engaged in a conspiracy to set prices in restraint of trade in the foreign currency exchange spot market); *Information, United States v. Yamada Mfg. Co.* (S. D. Ohio, 2015) (No. 1:15-cr-00047-SJD), <http://www.justice.gov/atr/case->

relying on newer technology are suitable for analysis under the Sherman Act as the business models remain largely similar to those that existed in 1890.²⁹⁵

Antitrust law must be changed in order for it to apply to nontraditional industries that use business models unsuitable for a Sherman Act analysis.²⁹⁶ This area of law cannot be abandoned altogether, as some scholars have suggested.²⁹⁷ Some of today's most profitable industries, such as Internet search engines, did not even exist in the most fledgling fashion when the Sherman Act was enacted.²⁹⁸ As the business models of some new industries are vastly different from what existed in 1890, the potential for consumer harms also differs.²⁹⁹ The scope of markets and what constitutes an "anticompetitive act" in such nontraditional industries can vary greatly from what is seen in traditional industries.³⁰⁰

Attempting to apply an outdated statutory framework comes with a risk of inapplicability.³⁰¹ The FTC's 2012 investigation of Google did not culminate in a lawsuit because the FTC found that Google only disadvantaged its competitors,

document/file/762741/download (alleging that Yamada took part in a conspiracy to eliminate competition by rigging bids and fixing prices); Complaint, United States v. Oklahoma State Chiropractic Indep. Physicians Ass'n (N.D. Okla. 2013) (No. 4:13-cv-00021-TCK-TLW), <http://www.justice.gov/atr/case-document/file/506791/download> (alleging that the association engaged in agreements which amounted to a group refusal to deal and resulted in increased prices for patients).

295. See, e.g., Biography.com Editors, *Henry Ford Biography*, BIOGRAPHY.COM, <http://www.biography.com/people/henry-ford-9298747> (last visited June 15, 2017). The mass production of automobiles did not begin until after Henry Ford introduced the Model T in October of 1908. *Id.* Henry Ford also introduced the assembly line technique of mass production in 1914, which revolutionized the manufacturing process for many goods. *Id.* However, the basic business model employed by an automobile manufacturer is the same as a manufacturing company in 1890—the manufacturer obtains the necessary parts, produces the product, then sells the product to a retailer, who sells it to a consumer. See Mark Vonderembse & David Dobrzykowski, *Understanding the Automotive Supply Chain: The Case for Chrysler's Toledo Supplier Park and its Integrated Partners KTPO, Magna, and OMMC*, 3–5, http://www.wistrans.org/cfire/documents/AutoSupplyChainCase10_30_09%20FINAL.pdf (last visited June 15, 2017). Thus, price squeezing, horizontal restrictions, or other anticompetitive acts in this industry would likely manifest in substantially the same way or cause the same types of harms to consumers.

296. See *supra* Sections II.B.2.b and II.B.3 for a discussion of the concerns unique to the Internet.

297. See, e.g., Robert J. Barro, *Why The Antitrust Cops Should Lay Off High Tech*, BLOOMBERGBUSINESS, <http://www.bloomberg.com/bw/stories/1998-08-16/why-the-antitrust-cops-should-lay-off-high-tech> (Aug. 17, 1998) (suggesting that antitrust regulation should not be applied to the computer industry).

298. For a discussion about industry developments since the Sherman Act was enacted, see *supra* notes 289–93 and accompanying text.

299. See *supra* notes 116–22 and accompanying text.

300. For discussion of market definitions generally, see *supra* Section II.B.2. For discussion of anticompetitive acts generally, see *supra* notes 154–79 and accompanying text.

301. See *supra* notes 289–93 and accompanying text for a discussion of why the Sherman Act is outdated.

not competition.³⁰² While this was the correct outcome, even if it were not, there was no appropriate alternative. Even if the FTC found that Google was acting in an anticompetitive manner, it is unlikely that a lawsuit against Google would have prevailed due to a lack of evidence of consumer harm.³⁰³ If a court found that Google was intentionally disadvantaging its rivals, it would be appropriate to hold Google liable under a traditional antitrust analysis.³⁰⁴ However, because Google was acting with the pro-consumer purpose to improve its search engine, such a holding would have been contrary to the goals of promoting consumer welfare.³⁰⁵

Due to the multisided structure of a search business model, any action taken by Google potentially impacts users, advertisers, and Google's competitors simultaneously.³⁰⁶ As such, Google may help one of these groups while also harming another without incurring liability.³⁰⁷ Ignoring potential harms to competition renders an antitrust framework underinclusive and inapplicable to a goal of promoting competition.³⁰⁸ However, holding against Google for actions harming competitors would be overinclusive as it would thwart actions that benefit consumers.³⁰⁹ For antitrust to apply to search engines and other nontraditional industries, a more flexible antitrust framework is needed to avoid such issues of overinclusiveness and underinclusiveness.

B. *Divide and Conquer: An Industry-Specific Approach to Antitrust*

To create an antitrust system that is applicable to a vast array of businesses, it is necessary to create several doctrines that are able to evolve independently of one another.³¹⁰ This will accommodate the great variations between industries.³¹¹ A multipart framework should be created for antitrust analysis of modern businesses. This framework should also permit the creation of additional categories as needed for unforeseen developments in technology.

Most businesses can be lumped into industry categories. Examples include energy (including oil and gas), industrial goods and services, consumer goods,

302. See Press Release, Fed. Trade Comm'n, *supra* note 105. The investigation was brought under Section 5 of the FTC Act, which allows for an even lower threshold for liability than a Sherman Act analysis. Hand, *supra* note 99. Despite this, the FTC did not find sufficient evidence to warrant filing a lawsuit. Press Release, Fed. Trade Comm'n, *supra* note 105. See *supra* notes 98–115 and accompanying text for a discussion of the FTC investigation.

303. For discussion of the FTC's finding, see *supra* notes 104–07 and accompanying text.

304. See *supra* Parts II.B.1 and II.B.2.a for a discussion of a traditional antitrust analysis.

305. See *supra* note 118–19 and accompanying text for a discussion of consumer welfare goal of antitrust.

306. See Evans, *supra* note 222, at 85. For a discussion of search as a multi-sided business model, see *supra* notes 222–28 and accompanying text.

307. See Evans, *supra* note 222, at 83.

308. See *id.*

309. See *id.*

310. For a proposal of how these doctrines should be divided, see *infra* notes 314–16 and accompanying text.

311. For discussion of how this tailoring would benefit an antitrust analysis, see *infra* notes 344–49 and accompanying text.

consumer services (such as media, food service, and travel), health care, financial services, information services, telecommunication services, and the Internet.³¹² An exact list of industries that should be considered in an antitrust framework is beyond the scope of this paper.³¹³ However, it is necessary to consider a split that looks something like this to solve the shortcomings of a regime based on the Sherman Act.³¹⁴ Congress should determine the appropriate industry list, since it is able to employ the assistance of various experts from different fields.

Perhaps the most suitable model for a new antitrust statutory framework can be found in intellectual property. Similar to antitrust, intellectual property necessarily seeks to strike a balance between consumer protection and incentives to promote a healthy marketplace.³¹⁵ However, while intellectual property has a fairly uniform set of policy goals focused on encouraging investment and innovation, the various areas covered within it require different, though partially overlapping doctrines to achieve these objectives.³¹⁶ As a result, intellectual property exists in the separate, but related, areas of patents, copyrights, and trademarks, as well as a few others.³¹⁷ Each of these areas requires a different legal approach to best achieve the common goals of intellectual property.³¹⁸ Each area has its own statutory framework that has been updated periodically to expand and keep pace with changes in technology and society.³¹⁹

312. See *Index Types*, NEW YORK STOCK EXCHANGE: SECTOR INDICES (last visited June 15, 2017), <https://www.nyse.com/indices/types> (providing information on how industries might be categorized).

313. See *Sectors & Industries Overview*, FIDELITY (last visited June 15, 2017), https://eresearch.fidelity.com/eresearch/markets_sectors/sectors/sectors_in_market.jhtml, *Companies by Industry*, NASDAQ (last visited Jan. 23, 2016), <http://www.nasdaq.com/screening/industries.aspx>, *North American Industry Classification System*, THE UNITED STATES CENSUS BUREAU (last visited June 15, 2017), <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2012>, and *Industry Center*, YAHOO! FINANCE (last visited June 15, 2017), https://biz.yahoo.com/ic/ind_index.html for alternative possibilities of how to categorize industries.

314. For a discussion of the shortcomings of the Sherman Act, see *supra* notes 303–11 and accompanying text.

315. See Robert Pitofsky, *Comments on Lemley: An Introduction to IP and Antitrust*, 13 SW. J. L. & TRADE AM. 257, 257–59 (2007) (pointing out that intellectual property and antitrust share roughly the same general goals).

316. See William W. Fisher III, *The Growth of Intellectual Property: A History of the Ownership of Ideas in the United States*, 2 (1999), <http://cyber.law.harvard.edu/people/ffisher/iphistory.pdf> (providing a general overview of these doctrines and how they developed overtime).

317. *Id.* at 2–10. The areas of trade secret and right of publicity will not be discussed here. For information on trade secret protections, see Nat'l Conference of Comm'rs on Uniform State Laws, *Uniform Trade Secrets Act with 1985 Amendments* (1986), http://www.uniformlaws.org/shared/docs/trade%20secrets/utsa_final_85.pdf. For a brief introduction to right of publicity, see Fisher, *supra* note 318, at 9–10.

318. See Fisher, *supra* note 318, at 2–10, for a deeper understanding of how patent law achieves these goals.

319. See *id.* “The history of each of [the intellectual property] doctrines (like the histories of most areas of the law) is involuted and idiosyncratic, but one overall trend is common to all:

Patent law, while also part of intellectual property law as a whole, focuses on protecting inventions.³²⁰ It is based in the United States Patent Act (Patent Act).³²¹ Congress enacted the first iteration of the Patent Act in 1790 under the power granted in Article I, Section 8 of the Constitution.³²² Throughout the nineteenth and twentieth centuries, as the types of inventions being produced expanded and changed, patent law expanded accordingly.³²³ For example, patent law was expanded to include industrial designs in 1842, plants in 1930, and surgical procedures in the 1950s.³²⁴ The Supreme Court first held that computer software was patentable in its 1981 decision, *Diamond v. Diehr*.³²⁵ Over time, the courts have adjusted their interpretations of patent laws to allow or deny patents as needed to compensate for changes in technology and the needs of society.³²⁶

Copyright law provides protection for “original forms of expression,”³²⁷ and is governed by the United States Copyright Act (Copyright Act).³²⁸ Like the Patent Act, the Copyright Act has gone through several versions.³²⁹ Congress adopted the original Copyright Act in 1790.³³⁰ Since that time, there have been changes in copyright law which have altered the duration of protection afforded to authors, expanded the types of works covered, and improved the rights of copyright holders.³³¹ For example, musical recordings and photographs, neither of which existed at the time the first Copyright Act was enacted, are both afforded protection under its current iteration.³³² Computer software is also protected under the Copyright Act.³³³ As technology has evolved to allow for the creation of new types of work, copyright doctrine has expanded accordingly.³³⁴

expansion. With rare exceptions, the set of entitlements created by each of the doctrines has grown steadily and dramatically from the eighteenth century to the present.” *Id.* at 2.

320. *Id.* at 2.

321. 35 U.S.C. §§ 1–390.

322. Samantha Payne, *Inventing in Congress: Patent Law Since 1790*, Prologue: Pieces of History, NATIONAL ARCHIVES (March 11, 2015), <http://blogs.archives.gov/prologue/?p=15058>. Article I, Section 8 of the United States Constitution reads, in pertinent part, “The Congress shall have Power . . . To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” U.S. CONST. art. I, § 8, cl. 1, 8.

323. Fisher, *supra* note 318, at 3.

324. *Id.* at 3–4.

325. 450 U.S. 175, 192 (1981).

326. Fisher, *supra* note 318, at 6–7 (discussing how the courts have been more or less generous with upholding patents as the reliance on patents has fluctuated in various industries).

327. *Id.* at 2.

328. 17 U.S.C. §§ 101–1332 (2010).

329. See *infra* notes 322–25 and accompanying text.

330. Fisher, *supra* note 318, at 2.

331. *Id.* at 2–3.

332. 17 U.S.C. § 102.

333. See 17 U.S.C. § 117.

334. Fisher, *supra* note 318, at 2–4.

Trademark law protects the symbols and words used to identify the source of goods and services.³³⁵ Trademark protection initially appeared in the United States as a common law development in the mid-nineteenth century.³³⁶ In 1946, Congress enacted the Lanham Act,³³⁷ which allows for federal statutory protection of trademarks and provides for remedies against infringement.³³⁸ In its early existence, trademark protection was only available for trademarks that included the name of the manufacturer.³³⁹ Over time, the protection has expanded to include a vast array of terms and product designs, and has even evolved to include protection against the trademark being diluted or tarnished.³⁴⁰

Intellectual property law is most instructive to engineering a new antitrust framework because of the way its doctrines have adjusted in reaction to society. Through the nineteenth century, the economy in the United States evolved from one that was heavily dependent upon agriculture to one increasingly dependent upon industry.³⁴¹ In the twentieth century, the economy again shifted with the emergence of information technology.³⁴² As the economy has evolved, the need for intellectual property rights has evolved with it.³⁴³ As a result, the doctrines of intellectual property have remained useful and relevant in a way that antitrust has not.

Courts and lawmakers can increase the flexibility and efficacy of antitrust law by dividing it in a fashion similar to intellectual property.³⁴⁴ In applying the Sherman Act to evolving industries and society over time, the courts have necessarily jumped through analytical hurdles and created numerous exemptions.³⁴⁵ As such, an analysis under the Sherman Act requires a number of steps—and added steps mean added opportunities for error and oversight.³⁴⁶ Under a divided antitrust scheme, Congress could correct court errors through updated legislation for specific affected industries, similar to updates to the Patent and Copyright Acts.³⁴⁷ As it currently exists, correcting an error through legislation would require a complex analysis of how the full antitrust framework may be impacted.³⁴⁸

335. *Id.* at 2.

336. *Id.* at 7.

337. 15 U.S.C. §1051–1141 (2012).

338. Fisher, *supra* note 318, at 8–9.

339. *Id.* at 7.

340. *Id.* at 7–8.

341. *Id.* at 10–11.

342. *Id.* at 11.

343. *See id.* at 11.

344. *See, e.g.,* Chicago Bd. of Trade v. United States, 246 U.S. 231 (1918) (creating the rule of reason analysis as an exception from per se application of illegality under the Sherman Act).

345. For a discussion of exemptions, see *supra* Part II.C.

346. For a discussion of the steps of a Sherman Act analysis, see *supra* Parts II.B.1 and II.B.2.a.

347. For a discussion of the Patent Act, see *supra* notes 322–28 and accompanying text. For a discussion of the Copyright Act, see *supra* notes 329–36 and accompanying text.

348. *See, e.g.,* Epstein, *supra* note 257.

Dividing antitrust into more closely tailored frameworks for various industries may not fully eliminate the need for judicially created exemptions.³⁴⁹ However, it is likely that fewer exemptions would be needed, as the frameworks would be more closely tailored to fit each industry.³⁵⁰ As a result, antitrust would be simplified and the application of it would be more straightforward. More bright-line rules could be created, rather than the vague standards that exist under the Sherman Act.³⁵¹ Any necessary exemptions could additionally be broad enough to apply throughout an industry without the risk of affecting future cases in other industries.³⁵²

To emulate the split framework of intellectual property for use in antitrust, Congress should enact separate statutes for each industry category, similar to the Patent Act, Copyright Act, and Lanham Act.³⁵³ These statutes should include similar provisions to the Sherman Act, stating the general types of behaviors that are anticompetitive.³⁵⁴ Unlike the Sherman Act, the specific purpose of the statutes—consumer protection—should be made clear.³⁵⁵ Each statute should also be made more specific, including in its text behaviors by firms that are known in that industry to result in consumer harms.³⁵⁶ Over time, the statutes should be updated as necessary, which will ideally result in frameworks that work separately by industry, but still achieve a unified goal of consumer protection.

C. *The Internet Industry and What it Might Look Like*

To best address consumer harms that may result from the business models of online-only products, a separate antitrust approach should be used for the Internet.³⁵⁷ The Internet industry should include only businesses whose offered products or services are digital in nature, rather than tangible goods and services that can be purchased through online channels.³⁵⁸ An Internet industry would

349. For a discussion of exemptions made in the past, see *supra* Part II.C.

350. See *infra* notes 357–71 and accompanying text.

351. See *supra* note 142 and accompanying text.

352. For a discussion of potential effects on future cases of the current antitrust framework, see *supra* notes 303–11 and accompanying text.

353. For a discussion of these acts, see *supra* notes 322–42 and accompanying text.

354. See *supra* notes 129–32 and accompanying text for discussion of the text of the Sherman Act.

355. 15 U.S.C. § 1 (2012). But see Part II.B.1 for an analysis of the consumer protection purpose of the Sherman Act as noted by the courts.

356. See *supra* notes 158–79 and accompanying text for examples of behaviors known in industries to result in consumer harms.

357. For a general discussion of search engine business models, see *supra* notes 42–48 and accompanying text.

358. For example, search engines and online marketing services should be included in the Internet industry. Online stores such as Amazon, however, should be treated the same as retailers with physical store locations. AMAZON, <http://www.amazon.com/> (last visited June 15, 2017). Likewise, while travel booking agencies like Kayak exist online, they should be treated the same as a travel agent selling these services from a physical office. KAYAK, <http://www.kayak.com> (last visited June 15, 2017).

necessarily need to include the variety of online offerings we are accustomed to today, as well as have room to accommodate rapid innovation.³⁵⁹ As such, an ideal statutory framework must accommodate various business models used for online products, which may harm consumers in different ways.³⁶⁰ To provide this flexibility, an Internet antitrust statute should include factors to be weighed by courts in determining whether a firm's pro-consumer actions outweigh potential harms.

To further accommodate various online business models, as well as the evolution of society toward a web-based center, the Internet industry should be further divided.³⁶¹ An ideal statute should divide the Internet into market types, each of which raises its own unique concerns in how to define the relevant market, how competition may be thwarted, and how consumers may be impacted.³⁶² For example, the business model of an information website that users mainly access to read content may be very different from a social media platform with the primary purpose of facilitating interactions between users.³⁶³

Statutory provisions should be included for specific handling of search engines, social media, information websites, email and communication services, streaming media, and software.³⁶⁴ While all of these categories involve paid advertising as part of their business models, the advertising appears differently and interacts with consumers in various ways.³⁶⁵ The ways in which a consumer may be harmed by targeted advertising differs—depending on how that advertising is targeted, what information is involved in the behind-the-scenes processes that result in these ads being served up to the user, and the ways these ads may differently affect the competitors of the firm operating the service on which the ad appears.³⁶⁶ As such, a holding of liability against a firm for consumer harms in one area could erroneously thwart pro-consumer actions in another area, simply because both utilize paid advertising. By maintaining separate statutory provisions for each, such effects could be minimized.

359. For an example of various products offered by online companies, see *infra* note 369 and accompanying text.

360. For an analysis of how online businesses differ from traditional industries for an antitrust analysis, see Parts II.B.2.b and II.B.3.

361. For an example of various products offered by online companies, see *infra* note 369 and accompanying text.

362. For a discussion of how online businesses differ from traditional industries for an antitrust analysis, see Parts II.B.2.b and II.B.3.

363. Compare WIKIPEDIA, <https://www.wikipedia.org/> (last visited June 15, 2017) (example of an information website), with FACEBOOK, <https://www.facebook.com> (last visited June 15, 2017) (example of social media platform).

364. See *infra* notes 376–78 and accompanying text for a proposal of how this could be addressed in a statute.

365. For a discussion of various online advertising, see *supra* notes 44–48, 212–16 and accompanying text.

366. For a discussion of various online advertising, see *supra* notes 44–48, 212–16 and accompanying text. See, e.g., Langford, *supra* note 36, at 1578–83 (discussing the possible harms to consumers of search bias).

While each Internet subcategory presents its own concerns, many of these services are interconnected in ways that are unprecedented in any prior market.³⁶⁷ Companies like Google, Yahoo!, and Microsoft operate in more than one of these areas and offer services that link their product offerings together for ease of use by consumers utilizing more than one product.³⁶⁸ For example, Google offers Internet search, advertising, email services, a social media platform, YouTube, and even its own browser, Google Chrome.³⁶⁹ This unique situation can be best handled by viewing each of these products separately, while also balancing the effects each has on the others.

Aside from the interconnection of products that exist online, there are other concerns which affect the function of an antitrust framework and they vastly differ from what has been seen in traditional industries.³⁷⁰ As market definition, market stability, and the cross-elasticity of demand differ greatly from traditional industries, an analysis of market power should likewise look different.³⁷¹ As the factors impacting a firm's ability to thwart competition and harm consumers do not exist in the same way online, the traditional analysis does not apply.³⁷² If courts attempt to apply the Sherman Act to the search engine industry, they risk setting precedent that will make it less applicable to traditional industries, where it is still useful.³⁷³ Instead, an Internet antitrust statute should include each of these differences in guidelines for analyzing a firm's behavior to ensure each aspect is appropriately considered.

To include all of the above-mentioned concerns, I propose an Internet antitrust act similar to the following:

Section 1: Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of online trade or commerce among the several States, or with foreign nations, with a likely result of harm to consumers, shall be illegal.³⁷⁴

367. For an overview of multisided markets, see *supra* notes 217–28 and accompanying text.

368. See, GOOGLE: OUR COMPANY, <https://www.google.com/intl/en/about/> (last visited June 15, 2017); MICROSOFT, <https://www.microsoft.com/en-us/> (last visited June 15, 2017); YAHOO!: ABOUT, <https://about.yahoo.com/> (last visited June 15, 2017).

369. See Alejandro Alba, *A list—from A to Z—of all the companies, brands Google's Alphabet currently owns*, (Aug. 11, 2015, 4:47 PM) N.Y. DAILY NEWS, <http://www.nydailynews.com/news/world/z-list-brands-companies-google-alphabet-owns-article-1.2321981>. Google operates its search engine on Google.com, Gmail email services, the Google+ social media network, offers a small number of information websites under its control, and owns and operates YouTube, a popular site that hosts streaming media. *Id.*

370. For an overview of a traditional antitrust analysis, see *supra* Parts II.B.1 and II.B.2.a.

371. For a discussion of cross-elasticity of demand, see *supra* notes 192–205 and accompanying text.

372. For an overview of a traditional antitrust analysis, see *supra* Parts II.B.1 and II.B.2.a.

373. For a discussion of potential problems with applying the Sherman Act to new industries, see *supra* notes 303–10 and accompanying text.

374. The text of Section 1 mirrors the text of § 1 of the Sherman Act, with slight changes to clarify that this act would apply to the Internet and to specify consumer harms as its focus. The Sherman Act, 15 U.S.C. § 1 (2012).

Section 2: (a) Any person or persons who shall (i) monopolize, (ii) attempt to monopolize, or (iii) combine or conspire with any other person or persons, to monopolize any part of the online trade or commerce among the several States, or with foreign nations, with a likely result of harm to consumers, shall be deemed guilty of a felony.³⁷⁵ (b) Such a violation shall require a finding that (i) the person or persons possess monopoly power in the relevant market, determined by their ability to control market activities; and (ii) the person or persons intentionally acted to acquire or maintain this power, as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.³⁷⁶

Section 3: This statute shall apply to all businesses providing products or services that exist solely online and in no tangible form.

Section 4: Whether a harm to consumers is a likely result of the actions of a person or persons shall be determined by weighing such potential harms against the potential benefits of such actions. This analysis should include, but should not be limited to, the following factors:

- (a) whether the product in question is a search engine, social media platform, email or communication service, streaming media service, or software product;
- (b) whether consumers pay for the use of the product or service;
- (c) whether the person or persons gain revenue from advertising targeted to consumers as part of the product or service;
- (d) any barriers to entry that exist or are lacking in the relevant market for the product or service;
- (e) the relative ease or difficulty of consumers to switch to an alternative product or service and the time and monetary cost to the consumer of engaging in such a switch;
- (f) the amount of time for which the person or persons has held, or is likely to hold, a market share of a sufficient size to control any market activity; and
- (g) whether, and to what degree, the product or service in question is connected to another product or service controlled by the same person or persons.

In addition to the above text, such a statute should likely include sections specifying appropriate criminal penalties and civil sanctions. However, such considerations are beyond the scope of this paper and best left to the legislature.

375. The text of Section 2(a) mirrors the text of § 2 of the Sherman Act, with slight changes to clarify that this act would apply to the Internet and to specify consumer harms as its focus. The Sherman Act, 15 U.S.C. § 2 (2012).

376. The text of Section 2(b) incorporates the two-prong analysis set forth in *United States v. Grinnell Corp.*, 384 U.S. 563, 570–71 (1966).

D. *An Analysis of Google*

Under the proposed new framework, a court should analyze Google and other search engines with consumer interests in mind.³⁷⁷ As David Balto states in the opening line of his article in support of Google, “[i]t’s about the consumer, stupid.”³⁷⁸ To best protect consumers, antitrust regulation should tread carefully in the area of search. An application of antitrust law that would force Google to cease functioning as it currently does could have massive detrimental effects on the everyday lives of most Americans.³⁷⁹ While competition is necessary to incentivize continued innovation, ceasing any actions of Google to help its competitors may be unwise.³⁸⁰

Focusing on Google’s search engine, the relevant consumer for an antitrust analysis should be the end user.³⁸¹ The relevant market should include not only competing search engines, but all search services that are publicly available at no cost to the consumer, excluding only specialty paid search services.³⁸² This market should be viewed as a two-sided market with advertising.³⁸³ Advertising should include all online ads that are targeted to the user’s preferences or information, including display ads on webpages and search ads tied to query terms.³⁸⁴ Additionally, users may access websites through other channels, such as clicking links in emails or typing a URL directly into the navigation bar of their browser. Such channels should be considered when discussing the relevant market and a search engine’s share in it.³⁸⁵

In applying the above-proposed statutory framework, an analysis of Google’s search engine would weigh in favor of greater latitude to maximize the

377. For a discussion of the consumer protection purpose of antitrust, see *supra* note 118 and accompanying text.

378. Balto, *supra* note 247.

379. See Eric K. Clemons, *Proposed Remedies for Regulating Google, Part 1: When Fear Turned to Loathing*, HUFFINGTON POST: HUFFPOST TECH: THE BLOG (Nov. 27, 2012, 7:16 PM), http://www.huffingtonpost.com/eric-k-clemons/proposed-remedies-regulating-google1_b_2160743.html (“We hold these truths to be self-evident: Online search is the most important activity on the net after email, and it is the gateway to e-commerce, to information access, and to the efficient functioning of an online economy in a wired world.”).

380. See Amy Lee, *Bing Director Stefan Weitz: ‘Traditional Search Is Failing’*, HUFFINGTON POST: HUFFPOST TECH (May 18, 2011 8:48 AM), http://www.huffingtonpost.com/2011/05/18/stefan-weitz-bing_n_863039.html (interviewing Bing’s director, Stefan Weitz, as he discusses that Google fails “to keep up with the changing needs of users” and how Bing is finding new ways to compete with Google).

381. For a discussion of determining the relevant consumer, see *supra* Part II.B.a.

382. For example, paid search providers like WestLaw would not be included. See WESTLAW, <https://www.westlaw.com> (last visited June 15, 2017).

383. For a discussion of determining the relevant market and multisided markets in an antitrust analysis, see *supra* Section II.B.2.a and II.B.2.b.

384. For a discussion of the debate about what products should be included in the relevant market for search engines, see *supra* notes 208–25 and accompanying text.

385. For a discussion of the debate about what products should be included in the relevant market for search engines, see *supra* notes 208–25 and accompanying text.

potential benefits to consumers than a Sherman Act analysis would allow.³⁸⁶ In considering factors (b) and (c) of Section 4 of the proposed statute, users do not pay for the use of Google search and Google's revenue is gained through targeted advertising.³⁸⁷ Thus, potential harms to consumers would likely stem from manipulation of search results to favor these paid ads.³⁸⁸ The barriers to entry for competition are very low in search engines, which weighs against a finding that consumer harms are likely under factor (d).³⁸⁹ Likewise, under factor (e), the relative ease and lack of cost for users to switch to an alternative search engine or access information in another way weighs against a finding of likely consumer harms.³⁹⁰ As Google is unlikely to maintain a strong enough market share to control market activity over an extended time, factor (f) also weighs against antitrust liability under the proposed framework.³⁹¹

Factor (g), whether the product or service in question is connected to another product or service, is more complex. The balancing concern for this factor is whether such connections serve to benefit the consumer, or if the connections create a barrier against competitors from entering the market. Google offers all of the services listed in Section 4(a), which work together to provide integrated services to consumers.³⁹² This list does not address Google's vertical search services, which include shopping, Google Maps, local results, flight planning, and will certainly include a host of new services in the near future.³⁹³ This also excludes the many areas in which Google is currently investing time and money, such as augmented reality and driverless cars.³⁹⁴ As long as an investigation into these services shows they potentially benefit consumers more than they potentially harm competition, this factor should also weigh in favor of Google.

Google, to date, has provided users with benefits that far outweigh any potential harms.³⁹⁵ Search engines generally create the enormous social benefit of connecting content providers with users in a mutually beneficial manner.³⁹⁶

386. For discussion of the limitations of the Sherman Act in analyzing search engines, see *supra* notes 303–11 and accompanying text.

387. For a discussion of free products as relevant markets, see *supra* notes 206–11 and accompanying text.

388. For a discussion of search bias, see *supra* notes 98–101 and accompanying text.

389. For a discussion of barriers to entry in search, see *supra* notes 232–46 and accompanying text.

390. For a discussion of switching costs online, see *supra* notes 234–38 and accompanying text.

391. For a discussion of the lack of market stability in search engines, see Part II.B.3.

392. See Alba, *supra* note 371. Google operates its search engine on Google.com; the Google+ social media network; Gmail email services; YouTube, a popular site that hosts streaming media; and operates its own web browser, Google Chrome. *Id.*

393. *Id.*

394. *Google Self-Driving Car Project*, GOOGLE, <https://www.google.com/selfdrivingcar/> (last visited June 15, 2017); Natasha Lomas, *What Google Sees In Augmented Reality*, TECHCRUNCH (Dec. 12, 2015), <http://techcrunch.com/2015/12/12/lifelike-adverts/>.

395. See Grimmelmann, *supra* note 16, at 16 (stating that restrictions on search engines would hamper innovation).

396. *Id.* at 15.

However, as a result of having such power, search engines do have the potential to inflict massive harm on both sides of this relationship.³⁹⁷ Thus, antitrust policy should carefully consider allowing the necessary freedoms to maximize these benefits while still exercising sufficient control when harms are recognized. So long as other search engines are staying in business against Google to maintain some form of competition, there is no reason for regulators or courts to hinder Google's freedom to innovate.³⁹⁸ Under the proposed statutory framework, if Google's actions begin to harm competition more than they benefit consumers, such actions could be stopped. In short, so long as Google is not blatantly acting with the intention to harm competition or consumers, it should be left to innovate as best it can.

III. CONCLUSION

The Sherman Act, over its long history, has served America's consumers well.³⁹⁹ If treated properly, it may continue to do so well into the future. If it is allowed to be picked apart, piece by piece by stretched precedents and exceptions, it will eventually fall apart. In an ever-changing technological landscape, we cannot afford to let the legal frameworks protecting us go stale. However, we must treat innovation and technology with the same respect, rather than suffocating it with outdated law.

Even though Google has adhered to Page and Brin's motto of "don't be evil" thus far, there is no guarantee that it will always abide by this adage.⁴⁰⁰ At some future time, the company may decide to go the way of many businesses before it and choose to maximize profits at the expense of consumers.⁴⁰¹ If that day comes and antitrust law has not yet evolved, consumers may be left at the tech giant's mercy with little available recourse. In order to balance a consumer interest in Google's innovation with a consumer interest in preventing its potential takeover of the search engine market, antitrust must necessarily innovate as well. Much like Google cannot stand still and hope it is not surpassed by a competitor, we cannot sit idly and hope to fix antitrust when we need it most.

397. *Id.*

398. See Greg Sterling, *Bing Reaches 20 Percent Search Market Share Milestone in US: Yahoo and Google both down slightly from Bing's gains*, SEARCH ENGINE LAND (Apr. 16, 2015, 12:25 AM), <http://searchengineland.com/bing-reaches-20-percent-search-milestone-in-us-market-218574>.

399. See *supra* Part II.B.1 for an analysis of the history of the Sherman Act.

400. Tanya Basu, *New Google Parent Company Drops 'Don't Be Evil' Motto*, TIME: BUSINESS (Oct. 4, 2015), <http://time.com/4060575/alphabet-google-dont-be-evil/>.

401. See *supra* notes 159–84 and accompanying text for examples of businesses engaging in behavior which harms consumers.