Is There a Market for Organic Search Engine Results and Can Their Manipulation Give Rise to Antitrust Liability?

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I. Introduction

Google answers users' questions ("search queries") with lists of relevant web sites and other information ("organic search" results) which are accompanied by advertising.[3] In recent years Google has been accused of manipulating its organic search results to favor its own services.[4] These allegations have often been accompanied by appeals for regulatory or antitrust intervention. While often asserted with passion, the public protestations about

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3 These queries may be "navigational searches," where the user just wants to go a particularly website, e.g., ebay.com, and enters "ebay" as a query in the search engine rather than type "ebay.com" in the web browser's address field. More relevantly for search advertising, a user can issue an informational query (e.g., "how high is Mount Everest?") or a transactional query (e.g., "cordless drill"). (See Elisa Gabbert, "The 3 Types of Search Queries & How You Should Target Them," WordStream, December 10, 2012, <http://www.wordstream.com/blog/ws/2012/12/10/three-types-of-search-queries#.>.)

4 In 2013 the FTC concluded its investigation of Google's search engine practices. See "Statement of the Federal Trade Commission Regarding Google's Search Practices, In the Matter of Google, Inc.," FTC File Number 111-0163, January 3, 2013. A related investigation by the European Commission remains open at this date; Cases COMP/C-3/39/740 (*Foundem v. Google*), COMP/C-3/39.775 (*1plus v. Google*) and COMP/C-3/39.768 (*Ciao v. Google*).

alleged antitrust violations are often made without legal or economic rigor. In particular, it is difficult to discern precisely what alleged relevant markets are implicated either as sources of alleged market power or as loci of alleged harm to competition. Moreover, the boundaries of relevant markets are often assumed or asserted without the required analysis.

In this paper we focus on the core antitrust issues that have been raised. We explore possible choices of relevant markets that might make the antitrust allegations meaningful. We test some of these possible relevant markets against basic principles of market definition. However, we do not perform the detailed factual and economic analyses required to determine the specific boundaries of any relevant market.

As part of testing potential relevant markets for consistency with basic market-definition principles, we necessarily discuss and describe Google's business model, which is primarily a two-sided platform to sell advertising. In particular, we analogize the organic search results that Google provides its users to the types of content many other advertising-selling two-sided platforms provide to their audiences. We view Google's two-sided Internet search–based advertising platform as a special case of a general model of two-sided advertising platforms.

In particular, we consider conclusory assertions that Internet search in isolation—i.e., as distinct from and not intertwined with the sale of search advertising—is a relevant market for antitrust analysis. Such a conclusory assertion ignores the two-sided nature of the search-advertising platform and the feedback effects that link the provision of organic-search results to consumers, on the one hand, and the sale to businesses of advertising accompanying those search results on the other.

Whether the feedback effects are sufficient to require that in general any relevant market encompass both sides of the two-sided platform is ultimately an empirical matter. In the context of organic search and search advertising, however, it is clear that these feedback effects are highly significant and, indeed, vital to the viability of the search-advertising platform, because organic search offered to consumers for free would not be a viable standalone business.

Thus the relevant market in which Google competes with respect to Internet search is at least as broad as a two-sided search-advertising market.[5] Our conclusion is justified both by principles of market definition in two-sided platforms as well as more general principles of market definition when firms engage in multiple activities whose prices are interrelated.

We also explore questions of what Google's obligations with respect to its organic search results, if any, might be to interested parties, whether consumers or businesses. In particular, we ask whether Google has a duty to provide organic search results that are neutral with

[5] For further discussion of the breadth of the relevant market see, for example, James D. Ratliff & Daniel L. Rubinfeld (2010) "Online Advertising: Defining Relevant Markets," *Journal of Competition Law & Economics*, 6(3), 1-34, (hereafter "Ratliff & Rubinfeld (2010)"), <http://jcle.oxfordjournals.org/content/6/3/653.short>, and Geoffrey A. Manne and Joshua D. Wright, "Google and the Limits of Antitrust: The Case Against the Antitrust Case Against Google," 34 *Harvard Journal of Law and Public Policy*, 171–244 (2011), at pages 220–223. If the relevant market is broader than online search advertising, the competition issues to be discussed in section VII below would likely be moot.

respect to whether the displayed listing is for a Google business rather than a non-Google business. In that context, we articulate and apply a standard that asks whether various practices related to Google's organic search results would harm competition that would have otherwise have occurred.

II. The allegations

Although many parties have made allegations that Google has harmed competition by manipulating a wide variety of organic search results it displays to users, it will be sufficient in order to elicit our central arguments to focus on a subset of such allegations. We focus on allegations and theories of harm articulated in two white papers by an industry group, FairSearch.[6,7]

The FairSearch white papers implicitly assert that Google has monopoly power in both a market for search and a market for search advertising, referring to "Google's monopoly grip on search and search advertising"[8] and to Google's "monopoly in Internet search and search advertising."[9]

FairSearch says that "Google has entered into competition with the very same websites which depend upon Google to reach consumers" and, as a result, instead of "direct[ing] users as efficiently as possible to the sites most likely to respond to their queries," Google now:[10]

> tries to answer those queries directly with its own products like Google Places (hotels, restaurants and destinations), Google Product Search (product information and price comparisons), Google Finance (investment and other financial issues), Google Maps (location and direction information), and YouTube (video content).

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6 FairSearch describes itself as "a group of businesses and organizations united to promote economic growth, innovation and choice across the Internet ecosystem by fostering and defending competition in online and mobile search. We believe in enforcement of existing laws to prevent anticompetitive behavior that harms consumers." <http://www.fairsearch.org/about-fairsearch/> Members of FairSearch include, as examples, Microsoft, operator of the Bing search engine that competes with Google; travel search providers, such as Kayak and Expedia; and product search providers, such as Foundem. (Press release, "FairSearch.org Coalition Grows, New U.S. and International Travel Members Urge Justice Department to Challenge Google-ITA Deal," December 13, 2010, <http://www.fairsearch.org/wp-content/uploads/2010/12/New-Members-Join-FairSearch-Coalition-Urging-DOJ-Challenge-to-Google-ITA-Dec-13-20101.pdf >.

7 FairSearch (2011) "Can Search Discrimination by a Monopolist Violate U.S. Antitrust Laws?," (hereafter "Can Search Discrimination by a Monopolist Violate U.S. Antitrust Laws?") <http://www.fairsearch.org/wp-content/uploads/2011/07/Can-Search-Discrimination-by-a-Monopolist-Violate-U.S.-Antitrust-Laws1.pdf>. FairSearch (2011) "Google's Transformation From Gateway to Gatekeeper: How Google's Exclusionary and Anticompetitive Conduct Restricts Innovation and Deceives Consumers," (hereafter "Google's Transformation From Gateway to Gatekeeper"), <http://www.fairsearch.org/wp-content/uploads/2011/11/Googles-Transformation-from-Gateway-to-Gatekeeper-Edited.pdf>.

8 "Can Search Discrimination by a Monopolist Violate U.S. Antitrust Laws?" at page 1.

9 "Google's Transformation From Gateway to Gatekeeper" at page 1.

10 "Google's Transformation From Gateway to Gatekeeper" at page 2.

FairSearch describes an alleged worry that:[11]

> Google has both the incentive and ability to manipulate its search results in ways that steer users to its own (possibly inferior) services and away from competitors--and thus deprive these competitors of the customers they need to survive.

Elsewhere, FairSearch explicitly states that Google's allegedly exclusionary acts are "leveraging its dominance in search to subdue its rivals."[12,13]

The FairSearch white papers are not specific about the alleged relevant markets implicated by their allegations. The papers appear to allege that Google leverages power in a market for search (e.g., "leveraging its dominance in search to subdue its rivals"). Presumably other relevant markets at issue would be relevant markets in which, for example, vertical search competitors of Google compete. These vertical-search competitors might include Yelp, Expedia, or Trip Advisor for travel services.

Our analysis will emphasize the significant difference between a market for search—i.e., the provision of organic search results to consumers in isolation from other activities—as opposed to a market for search advertising.

Whether search advertising is a relevant market in which Google competes is ultimately a matter to be determined by factual and economic analyses in the context of the legal antitrust issues that are raised.[14] We will argue that there is no relevant market for organic search itself because the scope of search in isolation is too narrow to allow an analysis of Google's incentives that have implications for search. We will also explain that an economic analysis of Google's incentives regarding search is necessary if one wishes to evaluate whether Google could exercise market power in search and, consequently, whether search in isolation could indeed be a relevant market. Before we can articulate this argument, we must first discuss Google's business model.

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11 "Can Search Discrimination by a Monopolist Violate U.S. Antitrust Laws?" at page 1.

12 FairSearch, "Google Strategy: If You Can't Buy 'Em, Use Your Dominance to Crush 'Em," FairSearch Blog, September 1, 2011, <http://www.fairsearch.org/search-manipulation/google-strategy-if-you-cant-buy-em-use-your-dominance-to-crush-em/>. This is one of several examples of FairSearch invoking a "leveraging" formulation.

13 P. Sean Morris asserts that Google is an "essential facility from a commercial perspective, but does not necessarily meet the criteria of essential facility under antitrust law" and that the relevant market is Internet search (by which he appears to mean—as is implicit in his market-share calculations—organic search in isolation). His assertion of the relevant market is offered without any economic or legal foundation. (P. Sean Morris, "Solving Google's Antitrust Dilemma: Cognitive Habits and Linking Rivals When There is Large Market Share in the Relevant Online Search Market," draft March 7, 2013, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2241200>, forthcoming in *Wake Forest Journal of Business and Intellectual Property Law*. We discuss claims that Google is an essential facility in section VII.A.

14 For a discussion of the issues involved, see Ratliff & Rubinfeld (2010).

III. A general model of a platform that monetizes consumer attention through the sale of advertising

In order to sell their products, services, ideas, or politicians to consumers, the sellers need to communicate the availability, features and characteristics, and prices of their offerings.[15] A publisher is an entity that attracts consumers that are willing to provide attention to messages the publisher delivers on behalf of advertisers. When communications lead to consummated transactions, the seller (i.e., advertiser) benefits. Thus, the advertiser has a willingness to pay a publisher for the opportunity to deliver its message to consumers.

Such advertising platforms are two-sided markets. As we have explained before:[16]

> The sale of advertising to businesses and the display of advertisements to consumers take place in a two-sided market at the hub of which sits the content publisher (and any other intermediaries facilitating the sale or display of the advertising).[17] The publisher's function is to match consumer eyeballs with the marketing messages of businesses; the publisher profits when it is able to attract the consumer eyeballs at a cost less than the amount the businesses are willing to pay the publisher to display their ads to these consumers.
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> In many two-sided advertising scenarios, the profit-making side (the advertisers) must subsidize the consumer side, where the subsidy to the consumer is the provision of the nonadvertising content—typically for free or at least below the average cost of producing and distributing the content—that attracts the consumers in the first place. The publisher pays for the creation and distribution of the content from the revenue it receives from the advertisers.

III.A. Varieties of honey

Publishers often use "honey" to attract consumers willing to devote attention to advertisers' messages.[18] Honey could be cash or a gift, as in the case of a promoter of timeshare properties who offers qualified leads an iPad in return for attending a sales presentation.

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15 Communications of a less-objective nature can also enhance the demand for the product being promoted. For simplicity of exposition, we refer to the advertiser as a seller and to the target of the advertising as a consumer, recognizing that the transaction sought by the advertiser may not be a sale and that the target of the advertising may be a business or other decision maker acting in a role other than as a consumer.

16 Ratliff & Rubinfeld (2010), at pages 7–8.

17 Simon P. Anderson & Jean J. Gabszewicz, "The Media and Advertising: A Tale of Two-Sided Markets," in *Handbook of Cultural Economics* (Victor Ginsburgh & David Throsby eds., 2006). Other examples of two-sided markets include credit-card networks (matching consumers bearing the network's cards with merchants that accept the network's card) and shopping malls (that match consumers wishing to make a variety of purchases with a variety of merchants wishing to sell their wares). Jean-Charles Rochet & Jean Tirole, "Platform Competition in Two-Sided Markets," *Journal of the European Economic Association* (1) 990 (2003).

18 The honey is often offered free of charge to the consumer. This is the case for platforms that are purely advertising supported. Hybrid models, where consumers pay a subscription or other access fee and there is also advertising, are also in use.

More common and more relevant to this paper, honey may be content that attracts consumers. This content can be factual and informative or entertaining or both. This content can reach the consumer via sight or sound after having been transmitted through a book or magazine, broadcast over television or radio, or delivered via a website viewed by the consumer. We refer to "organic content" as content that is meant to play the role of honey and for the delivery of which the publisher is not directly paid by any advertiser.[19,20]

Examples of organic-content honey include weather; news; this week's winning lotto numbers; astrological forecasts; sports scores; relationship advice; political rants; jokes; how-to guides; financial advice; short stories and poetry; denials of humans' role in climate change; baby pictures or cat videos, and "status updates" of "friends."

It may be the case that no honey is required to attract highly-motivated customers to attend to the advertiser's message. For example, before Craigslist, job seekers would purchase the local newspaper and turn directly to the want-ad section (i.e., bypassing the editorial content) to review ads for job openings.

III.B. Organic content can benefit third parties

Organic content serves as honey precisely because it offers the prospect of benefit to consumers. In expectation of greater advertising revenue, publishers often offer organic content to consumers for free or at a price lower than what publishers would charge if they did not also display ads.

Because content accompanied by advertising is voluntarily consumed, we can conclude through revealed preference that consumers, at least in expectation, are better off having consumed the combination of organic content and advertising, even accounting for the time required and any annoyance caused by the advertising.[21] On most advertising-supported platforms, typically only a fraction of advertising generates a sale of the product or service advertised. This shows that the content itself must have significant value apart from the direct value of the advertising to consumers.

[19] A publisher may offer hybrid honey that combines organic content with other incentives. For example, Microsoft offers Bing Rewards, whereby consumers "[g]et rewarded for searching and doing with Bing… including gift cards, Microsoft Points for Xbox, movie nights from Redbox, and more…." (Microsoft, "Bing Rewards," <http://www.bing.com/explore/rewards/>, accessed August 5, 2013.) Pre-Bing, Microsoft offered "Microsoft Live Search cashback," whereby "[c]onsumers who buy items from participating merchants after searching for them and clicking on an ad can get a cash rebate…." (Jessica E. Vascellaro and Robert A. Guth," Microsoft Offers Reward: Consumers Can Get Cash for Purchases Via Search Service," *Wall Street Journal*, May 22, 2008, <http://online.wsj.com/article/SB121136250134610255.html>.)

[20] The publisher does not always need to provide the honey, but instead can take advantage of consumers attracted by others. For example, an outdoor sporting event or music festival can attract large crowds. A publisher unrelated to these events could exploit this aggregation of consumers by employing a sky-writing airplane or a logo-emblazoned blimp to fly over the crowd. Other examples are billboards and other signs that are viewed simply because they become in the consumer's line of sight; i.e. the in-your-face nature of the advertising causes its message to be involuntarily consumed by consumers.

[21] As we noted above in the want-ad example, advertising is not necessarily annoying and need not otherwise create disutility. The ads may be perceived as valuable by the audience of the organic content. Indeed, the ads themselves may serve the role of organic content and even make organic content unnecessary to attract consumers' attention, as with publications (e.g., Craigslist) that are predominantly ads.

Thus the ex ante "price" a consumer "pays" to consume the publisher's content is negative, and is equal to the negative of the consumer's expected value from consuming the content (net, in particular, of any costs due to consuming the associated advertising). It follows that consumers typically benefit from publishers' organic content even when those consumers never purchase from an advertiser or never click on an ad (that would thereby generate revenue for the publisher). A notable example of this phenomenon is the provision of advertising-supported news.

The content honey that attracts consumers might deliver benefits as well to third parties at no charge to those parties. For example, a publication that wants to sell ads to suppliers of computer and mobile-device products may provide coverage of Apple's latest product launch, even though Apple may not advertise in the publication or otherwise pay the publication for the editorial coverage.[22] For the publisher, this content serves as honey to attract consumers' attention, which it monetizes by displaying ads from paying advertisers. For Apple, the publisher's content serves as free publicity. The publisher chooses this content because it will effectively attract consumers' attention. The fact that it also provides a benefit to Apple for which Apple does not pay is irrelevant to the publisher's choice.

Free publicity is a benefit for third parties that do not pay for it and have no right to demand it. A company receives free publicity only to the extent it is in the publisher's interest to provide it. That company has no right to demand such free publicity, because that company has not given the publisher any consideration for the publicity.

III.C. Advertising provides greater value when its message can be targeted to the consumers to whom it is delivered

If the publisher can attract consumers and deliver an advertiser's message to them at a cost lower than the amount the advertiser is willing to pay for message delivery, there is a surplus which can be shared between the publisher and the advertiser. The consumer also benefits from the advertising when the message delivered from the advertiser informs the consumer and helps him or her to make better choices—in addition to the benefit to the consumer from the content.

This surplus will be larger the better the publisher is able to match the advertisers' messages to the consumers that receive delivery of these messages.[23] Consumers are heterogeneous as are the products advertisers want to promote.[24] Delivering an advertising message for a particular product to a consumer who has no interest in the product, even after being exposed to the ad, provides no benefit to the advertiser and is a squandering of

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22 A publication may present content related to a paying advertiser in the organic content section. Further, a publication might condition what would otherwise be free publicity for a firm on that firm purchasing paid advertising. Alternatively, an advertiser may sponsor organic content directly; this is known as "native advertising" or "sponsored content." (Tanzina Vega, "Sponsors Now Pay for Online Articles, Not Just Ads," *New York Times*, April 7, 2013, <http://www.nytimes.com/2013/04/08/business/media/sponsors-now-pay-for-online-articles-not-just-ads.html>.)

23 For a discussion of the value from targeting advertising, see section III.B of Ratliff & Rubinfeld (2010). The degree to which an ad can be targeted to an audience is only one factor in determining the optimal choice of ads to display. It may produce more surplus for the publisher and advertiser to split to display (a) an ad for a high-margin product that, however, cannot be well targeted than (b) an ad for a low-margin product that can be well targeted.

24 We will use "product" to refer generally to a product, service, idea, politician, etc. being promoted.

the opportunity to have presented a more relevant message to that consumer. Targeting the advertising messages—i.e., matching advertising messages to the consumers to whom they will be delivered—is more important when a consumer's interests are narrow or when a product's appeal is narrow.

Effective targeting requires that the publisher (a) understand the types of consumers that are most likely to have at least a latent interest in the advertiser's product[25] and (b) be able to identify the relevant characteristics of consumers its honey attracts.[26]

The relevant characteristics of consumers might involve demographic characteristics or might be signaled by the consumer's choice to read an article on a particular topic, by the consumer's previous purchases, or—as in the case of a search query—by the consumer's explicit identification of an interest, e.g., "hotels near the Empire State Building."

Improved targeting of ads can benefit both advertisers and consumers and therefore also publishers. The advertiser can lower the acquisition cost of a sale when its ads are better targeted.[27] Consumers benefit from better-targeted ads because the ads are more relevant to their purchasing decisions. That both advertisers and consumers benefit from better ad targeting increases the surplus that the publisher's activities generate, typically allowing the publisher to earn greater profits.

III.D. A publisher can advertise its own products at an opportunity cost equal to the value the publisher could alternatively receive from selling advertising to an unaffiliated advertiser

A publisher may sell advertising to unaffiliated advertisers and may also display ads for the publisher's own products or products of affiliated business units (so-called "house ads").

For example, United Airlines' Hemispheres in-flight magazine has organic content relating to topics of interest to United's customers. When these customers read the magazine, they are also exposed to ads purchased by advertisers unaffiliated with United. In addition, there is content—some styled as organic content and some styled as traditional sold advertising—that informs the reader about United's own products and services.

For another example, Forbes.com advertises it Forbes BrandVoice™ product, which allows marketer to create content on the Forbes digital publishing platform.[28]

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25 By "latent interest in the product" we mean an interest that the consumer would not acknowledge before being exposed to the advertiser's message but would acknowledge post-exposure.

26 This formulation, "identify the types of consumers its honey attracts," is best suited when the composition of the attracted consumers is independent of the particular advertiser. In this case the publisher will seek advertisers that are well matched to the attracted audience. Alternatively, a publisher may deploy honey that is designed to attract consumers that are particularly well matched to particular advertisers' messages. For example, a publisher that wants to sell advertising to distributors of high-performance automobile accessories may create a magazine with content that is of interest to car enthusiasts.

27 A publisher may well charge a higher price, whether per-impression or per-click, for a better-targeted ad than for a less well targeted ad. The resulting higher probability that the impression or click will generate a sale for the advertiser offsets those higher advertising prices; i.e., reduces the advertiser's acquisition cost of a sale. As long as the provision of advertising is at all competitive, the advertiser will benefit to at least some degree from improvements in targeting.

28 See Forbes, BrandVoice, <http://www.forbesmedia.com/brandvoice-2/>, accessed September 18, 2013.

It would be incorrect for two reasons to say that a publisher provides free advertising to itself for its own products. First, the publisher incurs the costs of providing the platform on which the ads are displayed (e.g., United incurs the costs of publishing and distributing its magazine). Second, ads for its own products are displayed with an opportunity cost. Had the publisher not displayed ads for its products, the publisher could have instead displayed ads paid for by an unaffiliated advertiser. Thus a cost to a publisher of advertising its own products is the opportunity cost equal to the value the publisher would have alternatively received by selling the same ad-display inventory to the highest-value unaffiliated advertiser. Google has invested substantial resources to the measurement of this important opportunity cost.

We noted in the United Airlines' Hemispheres example above that a publisher can include content that is not styled as traditional sold advertising, but nevertheless promotes the publisher's affiliated businesses. This practice is quite common when publishers have affiliated businesses that could benefit from promotion. Google's inclusion of links to its affiliated businesses within organic search results is another example of this practice. We discuss in section V the tradeoff that any publisher with affiliated business faces when deciding whether to use its content to promote those affiliated businesses. Because the publisher internalizes the benefits to its affiliated businesses from promotion in the publisher's content, a publisher can have incentives to feature its affiliated businesses in the content to a greater degree than would be the case if those same businesses were unaffiliated with the publisher.

III.E. A publisher will co-determine its organic content and its advertising messages to maximize its profit

Different choices of organic content can result in different consumers being attracted. For any given set of advertisers and their ads, different choices of organic content can result in higher or lower quality matching between the consumers attracted and the ads displayed. Thus the choice of organic content can affect the publisher's profit.

Conversely, for a given set of consumers attracted, different choices of ads will be better or less well matched to these consumers. Thus the choices of ads can affect the publisher's profit as well. It follows that a publisher will choose its organic content and the ads it displays to jointly maximize the publisher's profit over the long run.

IV. Google's two-sided platform monetizes the attention of consumers attracted to the display of organic search results by selling adjacent advertising

Google's sale of search advertising through its two-sided platform is a special case of the general model described above in section III. Google plays the role of publisher as defined there.

Google allows consumers to ask questions in the form of search queries. In reply to such a query, Google responds with pages and pages of links to web-resident documents of information. The list of links with which Google responds to a query is made possible by Google's continuous indexing of content on the Web. The owner of a website or its content does not pay Google to be captured in Google's index or to be listed in organic search results.[29]

The consumer may benefit directly from the list of organic search results—for example, when the answer to the consumer's question (e.g., "in what year did Kramer vs. Kramer win Best Picture?") is contained at the top of the organic search results. Other times, the consumer benefits indirectly from the organic search results (and through ads as well) by clicking on one of the listed links to find information elsewhere on the Web that is relevant to the consumer's query.[30]

Thus, the honey offered by Google is the organic search results for which neither the querying user nor the owners of the websites listed pay Google.

IV.A. The user's search query string plays a special role in improving the matching of ads to consumers

We described in section III.C above how improved targeting of ads to consumers can increase the value for advertisers, publisher, and consumers. Users' visits to Google's search site are typically prompted by the user having a concrete question to answer or topic to explore.

The fact that a consumer enters a query search string when she arrives at Google's search site provides Google with specific information about the visiting consumer's interests at the moment of the visit. Google can combine information gleaned from the user's search query with any other information Google has in order to optimally choose ads to display to the user.

IV.B. Google would maximize return visits by consumers and, hence, advertising opportunities by providing relevant results to users' queries

Google will attract more users to its search site the greater are users' expectations that visiting Google's search site will be valuable. Users' expectations will be largely formed and maintained by the users' actual experiences visiting Google's search site.

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29 A website can prevent Google from indexing its content through the use of special meta tags. For example, embedding the HTML code "<meta name="googlebot" content="noindex">" in the <head> section of a web page prevents Google's "robots" from indexing the page. (Google, "Using meta tags to block access to your site," January 6, 2012, <http://support.google.com/webmasters/bin/answer.py?hl=en&answer=93710>.)

30 See, for example, Google, Economic Impact, <http://www.google.com/economicimpact/>, accessed August 22, 2013. Hal Varian, chief economist at Google, has estimated the value of search advertising to consumers. Using some rough back-of-the-envelope calculations, he estimates the value of time saved by users (who obtain better quality answers in less time) to be on the order of $65 billion per year. See, Hal Varian, "Economic Value of Google," presented at the Web 2.0 conference on March 29, 2011; <http://cdn.oreillystatic.com/en/assets/1/event/57/The%20Economic%20Impact%20of%20Google%20Presentation.pdf>, <http://www.transcriptsearch.com.es/id/_gI3nagglIY>, and "Google's Hal Varian on Economic Value of Google to US Advertisers and Customers," bizcloud, March 30, 2011, <http://bizcloudnetwork.com/googles-hal-varian-on-economic-value-of-google-to-us-advertisers-and-customers>. See also, Jacques Bughin, et al., "The Impact of Internet Technologies: Search," McKinsey & Company, July 2011, <http://www.mckinsey.com/~/media/mckinsey/dotcom/client_service/high%20tech/pdfs/impact_of_internet_technologies_search_final2.aspx>.

Users' visits to Google's search site are often prompted by the user having a concrete question to answer or topic to explore. Thus the value a user derives from a visit to Google's site will be directly related to whether she found a satisfactory answer to her question or whether the links displayed led her to information about her topic that she found valuable.

The key characteristic of organic search results that would lead a user to find the organic search results valuable is that those results be relevant to her search query. In some cases, the relevance of a result can be viewed ex ante (before the user clicks on the result) and ex post (after the user clicks on the result).[31] A searcher's decision whether to click on a results link for further information will be based on that link's ex ante relevance, i.e., the searcher's estimate of the link's relevance based only on the text displayed in the search results. The searcher's long-term satisfaction with Google as a venue for search will also depend on the ex post relevance of the links presented; i.e., how well the sites listed adequately addressed the searcher's information needs. In particular, when the goal of the query is to identify a product or service that meets the user's needs, search results that lead the user to more-appropriate products or services would be judged ex post to be more relevant.

V. Whether Google would find it profit-maximizing to trade off relevance of organic search results against the profit from displaying a less-relevant organic result for an affiliated business

We noted in section III.D that a publisher with affiliated businesses can promote those affiliated businesses both within its advertising and within its content (as content that is not styled as traditional sold advertising), and that Google's promotion of its affiliated businesses within its organic search results is an example of this common practice. We noted as well that, because a publisher internalizes the benefit to its affiliated businesses from such promotion, a publisher can have incentives to promote its affiliated business to a greater degree than were those businesses unaffiliated with the publisher.

In section II we noted the FairSearch assertion that "Google has both the incentive and ability to manipulate its search results in ways that steer users to its own (possibly inferior) services and away from competitors…."[32] We now consider Google's private incentives for ordering organic-search links to a Google-affiliated business relative to organic-search links to a competing non-affiliated business in a list of organic-search results.

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[31] Note that in many cases a search engine will give the answer to the query directly in the results, i.e., without requiring the user to click on a results link. An example of such a query is "how tall is the empire state building?." In such cases when the searcher's question is answered without clicking on a link, there is no meaning to ex post relevance. For more see, for example, Shashi Seth, "A New Era of Search is about the Answers, Not Just the Links," TechCrunch, May 7, 2011, <http://techcrunch.com/2011/05/07/search-answers-not-just-links/>.

[32] "Can Search Discrimination by a Monopolist Violate U.S. Antitrust Laws?" at page 1.

As part of a wider investigation into Google's business practices, the Federal Trade Commission (FTC) investigated this question. The FTC described its investigation and conclusions regarding allegations that Google's biases its display of search results:[33]

> The FTC conducted an extensive investigation into allegations that Google had manipulated its search algorithms to harm vertical websites and unfairly promote its own competing vertical properties, a practice commonly known as "search bias." In particular, the FTC evaluated Google's introduction of "Universal Search"—a product that prominently displays targeted Google properties in response to specific categories of searches, such as shopping and local—to determine whether Google used that product to reduce or eliminate a nascent competitive threat. Similarly, the investigation focused on the allegation that Google altered its search algorithms to demote certain vertical websites in an effort to reduce or eliminate a nascent competitive threat.… [T]he FTC concluded that the introduction of Universal Search, as well as additional changes made to Google's search algorithms—even those that may have had the effect of harming individual competitors—could be plausibly justified as innovations that improved Google's product and the experience of its users. [The FTC] therefore has chosen to close the investigation.

FTC participants interpreted the findings. For example, the FTC's outside counsel, Beth Wilkinson, stated that,[34]

> Undoubtedly, Google took aggressive actions to gain advantage over rival search providers. However, the FTC's mission is to protect competition, and not individual competitors. The evidence did not demonstrate that Google's actions in this area stifled competition in violation of U.S. law.

FTC chair Jon Leibowitz opined,[35]

> We close that investigation, finding that the evidence does not support a claim that Google's prominent display of its own content on its general search page was undertaken without legitimate justification.…
>
> Although some evidence suggested that Google was trying to eliminate competition, Google's primary reason for changing the look and feel of its search results to highlight its own products was to improve the user experience. Similarly, changes to Google's algorithm that had the effect of demoting certain competing websites had some plausible connection with improving Google's search results, especially when competitors

33 Federal Trade Commission, "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," January 3, 2013, (hereafter "FTC press release") <http://ftc.gov/opa/2013/01/google.shtm>.

34 FTC press release.

35 Federal Trade Commission, Google Press Conference, Opening Remarks of Federal Trade Commission Chairman Jon Leibowitz As Prepared for Delivery, January 3, 2013 (hereafter "Leibowitz Opening Remarks") <http://www.ftc.gov/speeches/leibowitz/130103googleleibowitzremarks.pdf>.

> often tried to game Google's algorithm in ways that benefitted those firms, but not consumers looking for the best search results. Tellingly, Google's search engine rivals engaged in many of the same product design choices that Google did, suggesting that this practice benefits consumers.

In this section we put aside the FTC's findings and ask under what conditions Google would have the *incentive* to take into account—in its decisions regarding the rank ordering of organic-search results—whether a business is affiliated with Google or is unaffiliated with Google.

Returning to FairSearch's assertion that "Google has both the incentive and ability to manipulate its search results in ways that steer users to its own (possibly inferior) services and away from competitors,"[36] we note that the FairSearch white paper does not offer a basis on which Google would determine that a competing business is higher quality and therefore that a link to it would be more relevant than a link to the Google-affiliated business. For the purpose of this discussion only, we will posit that the Google-affiliated business is lower quality and therefore less relevant than the non-affiliated business and that this fact is discernible by Google.

When Google displays a list of organic search results pointing to sites unaffiliated with Google, Google receives no consideration from that display. As a result, Google's incentives in choosing what organic search results to more prominently display are to choose those most relevant to the user's query. This will maximize the user's satisfaction with this particular search experience. It will also strengthen or maintain the strength of the user's expectation of the value she would receive by performing a subsequent search at Google.

The sites more prominently listed in the organic search results benefit from greater free publicity than sites listed less prominently or not at all.[37] This benefit to those sites is not internalized in Google's choice of organic search results as long as the more prominently listed web sites are not affiliated with Google.

When a website affiliated with Google is relevant to some degree to a user's query, Google's optimal calculus regarding what links to prominently display is more complicated. If the Google-affiliated link is also the most-relevant link to the user's query, then the Google affiliation does not affect Google's choice of prominently presented links: the most relevant site, which is also the Google-affiliated site, would be displayed most prominently.

Suppose, however, that the Google-affiliated site is to some degree less relevant to the user's query than is some other link. In this case, Google faces a tradeoff. First, if Google listed the less-relevant, Google-affiliated site more prominently, Google would benefit from the greater "free publicity" that site would receive.[38] (When a site is not Google affiliated,

36 "Can Search Discrimination by a Monopolist Violate U.S. Antitrust Laws?" at page 1.

37 A typical search query on google.com results in more than 1 million results. Thus it is likely that every nontrivially relevant result in Google's index is listed somewhere in the query's results.

38 We put "free publicity" in quotes when the phrase is used to characterize the value a Google-affiliated business receives from being listed in Google's organic search results. When we did not do so when characterizing the value an unaffiliated business receives from being listed in Google's organic results, for a simple reason: The benefit an unaffiliated business receives from its listing in Google's organic results is

Google does not internalize the enhanced free publicity that site would receive if more prominently listed in the organic search results. If the site is Google affiliated, Google can internalize the free publicity the site receives.)

Second, and in the opposite direction, choosing the less-relevant Google-affiliated site to display more prominently would, by assumption, lower to some degree the relevance of the organic search results. This effect, if nonnegligible, could to some extent cause the user to have a poorer search experience compared to one in which the more-relevant link was listed more prominently. This could lead the consumer to lower her expectations for the quality and value of a Google search the next time she had a question to answer or a topic to research.[39]

When consumers have lower expectations for the value of searching on Google, they would search less on Google for two reasons. First, even if—contrary to fact—there were no substitutes for searching on Google, consumers would search less on Google because there would be searches that would have been worthwhile if searching on Google had higher value but would not be worth the consumer's effort if searching on Google had lower value. Second, if the value of searching on Google were perceived to be lower, some consumers who previously had judged Google the best search engine relative to competitors' engines would now favor a competitor's engine over Google's and shift their searching to such competing engines.

Consumers would become aware of any diminution in the relevance of Google's results in both absolute and relative senses. In the absolute sense, if Google led consumers to a vertical search service that was of low value, consumers would determine that the Google search that led them there was of low value as well. This assessment requires no awareness by consumers of the existence of better vertical search services or of what vertical search services are promoted by competing search engines. Indeed, if consumers did not have a different and more negative experience when led to an assumed lower-quality vertical search service than when led to an assumed higher-quality one, this would call into question the assertion that one was actually lower quality than the other.

In the relative sense, consumers would become aware if Google were featuring a lower-quality vertical search service when they become aware of a higher-quality vertical search service that Google disfavored. Even consumers who exclusively use Google as a general-purpose search engine could become aware of higher-quality vertical search services because general-purpose search is not the only means by which consumers can learn about vertical search services. News media would discuss and recommend high-quality vertical search services. Consumers who found better vertical search services by any means would spread the word by sharing on social networking sites and in virtual and real-life personal communication (i.e., the power of "word of mouth"). For example, the authors have found that frequent travelers are eager sharers of the best travel-related vertical search services they have found.

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absolutely free to that business; it pays nothing for it. The benefit to a Google-affiliated business does not appear to be so free, however, because Google has spent tremendous amounts of money building and operating the infrastructure that delivers this "free publicity" to a Google-affiliated business.

[39] Note that all companies that provide a search engine along with other services face this same tradeoff as do any recommender services.

Faced with this tradeoff, Google would then need to compare (a) the harm to users' search experiences from the more prominent display of the less-relevant link and (b) the benefit to the Google-affiliated site from the enhanced free publicity.

Google would be more likely to more prominently display the assumed less-relevant Google-affiliated link (a) the less the relevance differential between the two sites (and hence the less harm to the user from more prominent display of the lower-quality site) and (b) the greater the beneficial effect of the enhanced free publicity on Google's affiliated business. Conversely, Google would be more likely to more prominently display the more-relevant website (not affiliated with Google) the greater the relevance advantage of the non-Google site and the lower the beneficial effect of the enhanced free publicity on Google's affiliated business.

We note that the FTC's "finding that the evidence does not support a claim that Google's prominent display of its own content on its general search page was undertaken without legitimate justification…."[40] is consistent with an assessment by Google that the extent to which its vertical search services are inferior to competing vertical search services is small, zero, or even negative (i.e., that Google's vertical services could be superior to competitors' vertical search services).

The above discussion offers some guidance as to how one might give clarity to the term "search bias." If "search bias" simply represents the practice of ranking one's own sites higher in the presentation of search results, then the concept has little relevance from an antitrust perspective because there would be no way to distinguish cases when that "bias" was pro-competitive—for example, because it resulted from "innovations that improved [the search engine's] product and the experience of its users"[41]—from cases when that "bias" was anticompetitive according to a standard such as we discuss in section VII below.[42]

One final caveat. In this paper we will not evaluate any non-antitrust claims that Google engaged in false advertising or other deceptive practices. In essence, we will assume that Google makes no representation or guarantee, explicitly or implicitly, that sites listed in its organic search results are listed in declining order of some metric of relevance.[43] In other

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40 Leibowitz Opening Remarks.

41 FTC press release.

42 For a more nuanced discussion of the meaning or lack of meaning of search neutrality, see Daniel A. Crane, "Search Neutrality as an Antitrust Principle," University of Michigan Public Law Working Paper No. 256, 2011), available at http://ssrn.com/abstract=1961742. See also, Marina Lao, "'Neutral' Search as a Basis for Antitrust Action?" *Harvard Journal of Law & Technology*," Volume 26, Number 2, Spring 2013. See also, Oren Bracha and Frank Pasquale, "Federal Search Commission? Access, Fairness, and Accountability in the Law of Search." 93 *Cornell* Law Review (2013), 1049-1210. The authors point out search engine "bias" can cover a wide range of phenomena, which may or not require a regulatory response (at page 1167).

43 "Relevance is a slippery and subjective concept, different for every user and every query, and there is no *a priori* way to define it…." (Geoffrey A. Manne and Joshua Wright (2011) "If Search Neutrality is the Answer, What's the Question?," Lewis & Clark Law School Legal Research Paper Series, Paper No. 2011-14, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1807951>, at page 12.)

words, we assume that consumers understand that Google may elevate the search ranking of a Google-affiliated web site because it is Google affiliated.[44,45]

VI. Organic Search Results is Not a Business in Itself and Cannot Be the Scope of a Properly Defined Relevant Antitrust Market

We now consider the implicit allegation by FairSearch that search is a standalone relevant market for antitrust analysis.[46]

In isolation, organic search generates no revenue but requires substantial sunk investments and ongoing operational costs; in itself organic search offered for free is unprofitable.

Further, as we explained in section III.E, a publisher will optimally co-determine its organic content and advertising to maximize its profit. In other words, Google's choice of organic search results, in reply to any given search query string, serves the interest of Google's profit from its overall search-advertising business.

We now explain why Google's organic search service cannot be meaningfully said to compete in a relevant market limited to organic search. We argue from two different perspectives to arrive at the same conclusion in both cases. First we argue that the interdependence of the economics of organic search and search advertising prevents a relevant market from being limited to only organic search. Second, we exploit the fact that Google's search advertising takes place in a two-sided market and refer to the literature on market definition in two-sided platforms to conclude that the relevant market must incorporate both sides of the platform and, hence, cannot be limited to organic search alone.

VI.A. When the defendant provides interrelated products, analysis of the relevant market in which it competes must incorporate those interrelated products

In an antitrust analysis of allegations of anticompetitive behavior, one or more "relevant markets" may be defined to aid that analysis. Generally speaking, a relevant market must be

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44 Our understanding is that organic rankings of advertisers' websites by Google, Bing, Yahoo!, and other search engines are determined on the basis of complex algorithms that take many factors into account including the quality of the website and the relative value of the website in relation to other links.

45 In June 2013, the FTC updated guidelines first laid out in 2002 in letters it sent to general search engine companies, including Google, Bing, Yahoo!, as well as vertical search services, to ensure that "regardless of the precise form that search takes now or in the future, paid search results and other forms of advertising should be clearly distinguishable from natural search results." (Federal Trade Commission, "FTC Consumer Protection Staff Updates Agency's Guidance to Search Engine Industry on the Need to Distinguish Between Advertisements and Search Results," June 25, 2013, <http://www.ftc.gov/opa/2013/06/searchengine.shtm>. See also Edward Wyatt, "F.T.C. Tells Search Engines to Label Advertising as Such," New York Times, June 25, 2013, <http://www.nytimes.com/2013/06/26/business/ftc-tells-search-engines-to-label-advertising-as-such.html>.)

46 See section II above, citing to FairSearch references to "Google's monopoly grip on search" and Google's "monopoly in Internet search." ("Can Search Discrimination by a Monopolist Violate U.S. Antitrust Laws?" at page 1. "Can Search Discrimination by a Monopolist Violate U.S. Antitrust Laws?" at page 1.)

sufficiently broad that, if it were monopolized in fact or by hypothesis, the monopolist of the conjectured market would be able to profitably exercise market power with that market.

When some activities (such as pricing of some products) affect the demand for other products, an analysis must incorporate all of these activities and products in order to determine whether an exercise of market power would be profitable.

While directed towards merger analysis, the DOJ/FTC Horizontal Merger Guidelines nevertheless provide a useful explanation of the role of market definition in the analysis of potential anticompetitive effects in non-merger contexts as well.[47] The Guidelines make it clear that market definition can be a useful legal construct in evaluating alleged anticompetitive effects, but that market definition is not an end in itself.[48] In a merger context, the Guidelines propose that a relevant market be one in which a profit-maximizing hypothetical monopolist would find it profitable post-merger to "impose at least a small but significant and non-transitory increase in price ('SSNIP') on at least one product in the market…."[49] When the Horizontal Merger Guidelines are applied to non-merger contexts, they are often interpreted to ask whether the hypothetical monopolist could set a price significantly and durably above the "competitive level."[50]

The Horizontal Merger Guidelines address the situation in which firms produce multiple products and the pricing of those products is interrelated, i.e., the optimal price for one product depends on the pricing of the other products:[51]

> [I]f the pricing incentives of the firms supplying the products in the candidate market differ substantially from those of the hypothetical monopolist, for reasons other than the latter's control over a larger group of substitutes, the Agencies may instead employ the concept of a hypothetical profit-maximizing cartel comprised of the firms (with all their products) that sell the products in the candidate market. This approach is most likely to be appropriate if the merging firms sell products outside the candidate market that significantly affect their pricing incentives for products in the candidate market. This could occur, for example, if the candidate market is one for durable equipment and the firms selling that equipment derive substantial net revenues from selling spare parts and service for that equipment.

This situation applies here in order to evaluate assertions that organic search is a standalone relevant market because Google does not produce organic search results in isolation; instead organic search is a product that is complementary to Google's sale of

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47 U.S. Department of Justice and the Federal Trade Commission, "Horizontal Merger Guidelines," August 19, 2010, <http://www.justice.gov/atr/public/guidelines/hmg-2010.html >, (hereafter "Horizontal Merger Guidelines").

48 Horizontal Merger Guidelines, § 4, "Evidence of competitive effects can inform market definition, just as market definition can be informative regarding competitive effects."

49 Horizontal Merger Guidelines, § 4.1.1.

50 For discussion of the application of the Horizontal Merger Guidelines to non-merger contexts see, for example, Lawrence J. White (2008) "Market Power and Market Definition in Monopolization Cases: A Paradigm is Missing," in Wayne D. Collins, ed., *Issues in Competition Law and Policy*. Chicago: American Bar Association.

51 Horizontal Merger Guidelines, footnote 4.

advertising. Moreover, it is clear that the optimal "price" of organic search is interrelated with the prices of search advertising. Indeed, organic search is offered for free.[52] Google's ability to offer organic search as a free service relies crucially on its concomitant revenue from the sale of search advertising. Were it not for the complementary search-advertising business, organic search would likely have to be offered on a paid basis or not at all.

This view of market definition when a firm produces interrelated products is consistent with the opinion of recently departed FTC Commissioner Thomas Rosch. According to Commissioner Rosch, citing and quoting the above-referenced footnote from the Horizontal Merger Guidelines,[53]

> [I]f the price of one product affects the prices of another product sold by the same company then the two products should be placed in the same candidate market.

The District Court denied the FTC's request for a preliminary injunction—because it could not conclude "that the FTC has demonstrated likelihood of success on the merits"[54]—noting, consistent with Commissioner Rosch, that:[55]

> Courts also generally find that a cluster of related products are in the same relevant product market… when the prices of the products are interdependent.

VI.B. Any analysis of Google's incentives to manipulate its organic search results must be performed within a market broad enough to encompass Google's interrelated activities

We have pointed out that if one were to look at Google's provision of organic search results on a standalone basis, one would find that it provides no revenue to Google, incurs substantial costs for Google, and is thus unprofitable. Moreover, any change in Google's policies with respect to its provision of organic search results that generated revenue or any

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52 Randal Picker disputes that Google offers its organic-search results to consumers for free. In a presentation at a May 2013 search-engine conference at George Mason Law School, as well as earlier presentations, Professor Picker states that the ratio of the number of ad links to the number or organic links is a measure of an implicit "advertising price that search engines charge consumers." (See also Randal C. Picker, "Google and Antitrust," American Enterprise Institute, October 5, 2012, <http://t.co/YwILtNyw>, and Randy Picker, "Picker American Enterprise Institute Talk: Google and Antitrust," <http://www.youtube.com/watch?v=mSGuO4RqQeo>, October 6, 2012.) This approach is suspect, at least and particularly in the context of organic search results accompanied by related ads, because Professor Picker's proposed metric implicitly treats the ads as a burden on and source of disutility to users rather than accounting for the additional value to users from the ads themselves. There is no reason to think that ads alongside the organic results degrade the quality of the user's experience. The ads are chosen to be relevant to the keywords the searcher entered. Indeed, often it is the case that the sponsored ad is identical to the most-relevant organic result. An advertiser's bidding sufficiently high to win the auction to present an ad in response to a particular keyword provides a credible signal that the ad will be relevant to the user's query and thus useful and valuable to the user.

53 Dissenting Statement of Commissioner Rosch, *In the Matter of Laboratory Corporation of America and Laboratory Corporation of America Holdings*, FTC Docket No. 9345 and File No. 101-0152 (Nov. 30, 2010).

54 Order Denying Preliminary Injunction, *FTC v. Laboratory Corp. of America*, SACV 10-1873 AG 31 (C.D. Cal. 2011) (hereafter "Order Denying Preliminary Injunction") at ¶ 167.

55 Order Denying Preliminary Injunction, at ¶ 147 (citations omitted).

other benefits, or reduced Google's cost of operating its search service, would likely improve Google's (currently negative) profits from organic search viewed as a standalone business. Thus, Google is not profit maximizing with respect to organic search in isolation.

It is clear that viewing Google's provision of organic search results as a standalone business is analytically incorrect. The fact that it is unprofitable when so viewed indicates that it is justified by its effects outside that narrow scope. Likewise, one cannot understand Google's incentives to make changes in its policies regarding the provision of organic search results without also looking for the effects of such changes outside the narrow scope of organic search as a standalone business.

Therefore it would be analytically incorrect to define a relevant market for the purposes of antitrust analysis that includes only organic search. Instead, any antitrust analysis regarding Google's activities with respect to the provision of organic search results must be performed on a broader terrain that includes at least Google's broader search advertising business as well as any other Google-affiliated businesses that rely significantly on their listing in Google's organic search results.

This perspective elaborates on earlier discussion in section V, where we pointed out that Google must consider effects of its choices with respect to organic search results on its broader search advertising business and any other Google-affiliated business that would benefit from more-prominent display in organic search results.

VI.C. The literature of two-sided markets confirms that the relevant market should be broad enough to encompass both search advertising and organic search

The literature on two-sided platforms has developed significantly since approximately 2002.[56] It is widely recognized that competition analysis, and market definition and the assessment of market power in particular, must include both sides of the platform.

In surveying this literature, Emch and Thompson report that:[57]

> One robust finding of this line of research has been that welfare-maximizing and profit-maximizing prices on each side of the market depend on cost and demand on both sides of the market.

Emch and Thompson then go on to specify a methodology for market definition in two-sided industries that involves a SSNIP test using the hypothetical-monopolist paradigm. They argue that it is not appropriate to apply a SSNIP to either side's price in isolation but

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[56] Although the literature on two-sided platforms dates back at least to William F. Baxter, "Bank Interchange of Transactional Paper: Legal and Economic Perspectives," *Journal of Law and Economics*, (26)3, October 1983, 541–588, the literature has developed particularly intensively since the beginning of this century as marked by seminal papers such as Jean-Charles Rochet and Jean Tirole (2002) "Cooperation among competitors: Some economics of payment card associations," *RAND Journal of Economics*, 33(4 (Winter)), 549–570.

[57] Eric Emch and T. Scott Thompson (2006)" Market definition and market power in payment card networks," *Review of Network Economics* 5(1 (March)), 45–60 (hereafter "Emch & Thompson") at page 47.

rather to "the sum… of the two prices charged to the two sides of the market."[58] Thus their market-definition methodology explicitly incorporates both sides of the platform.

Similarly, Evans states that in market definition "[t]he pricing analysis must consider all sides of the market and their interactions" and "it is not possible to [address the question of market power in multi-sided platforms] without considering the combined and interrelated effects on all customer groups served by the platform."[59]

In regards specifically to a case involving advertising-supported media, Evans and Noel write:[60]

> [I]t is not possible to analyze the competitive constraints on weekly television guides—the essence of the market definition and power examination—without considering the sale of advertising directly through the guides.…

Although both sides of the platform must be accounted for in any antitrust analysis, industries differ in the intensity of their two-sidedness and, hence, in the degree to which one side disciplines the other.[61] In the context of search advertising, however, there can be no doubt that the indirect network effects between organic search on the one side and search advertising on the other are highly significant, because it is obvious that those network effects are crucial for the viability of the platform. As we pointed out above, organic search is unprofitable as a standalone business.

VII. Analysis of Antitrust Liability Arising from Alleged Manipulation of Organic Search Results

VII.A. The standard for antitrust liability arising from alleged manipulation of organic search results

We now discuss the appropriate standard that would underlie an analysis of Google's potential antitrust liability flowing from the alleged manipulation of organic search results that favored a Google-affiliated business and disfavored a competing business that is not Google affiliated.

To sharpen the question, we consider a case more extreme than any facts we understand to have been alleged. We consider the case in which Google is accused of refusing to list a competing business in Google's organic search results.[62] We then ask, assuming the factual

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58 Emch & Thompson, at pages 53–54.

59 David S. Evans (2003) "The Antitrust Economics of Multi-Sided Platform Markets," *Yale Journal on Regulation*, 20, 325–381, at pages 357, 360.

60 David S. Evans and Michael Noel (2005) "Defining Antitrust Markets When Firms Operate Two-Sided Platforms," *Columbia Business Law Review* 2005(3), 667–701 (hereafter "Evans & Noel") at page 699.

61 Evans & Noel, at pages 671, 695.

62 Professor Patterson's more moderate hypothetical would assume that Google lowered the ranking of a competitor's organic-search entry. See Mark Patterson, "How Can We Measure Google's Market Power?" *Antitrust Competition and Policy Blog*, May 21, 2012, <http://lawprofessors.typepad.com/antitrustprof_blog/2012/05/is-there-a-basis-in-antitrust-law-for-requiring-neutral-search-results-comments-of-mark-patterson.html>. In either case, our qualitative analysis would be quite similar.

predicates of such an allegation were proven, what additional findings would be required for this refusal to deal to rise to be an antitrust violation under the Sherman Act. We note in passing that we are aware of no generalized duty to deal that would require any company to aid a competitor, including any duty to give free publicity to a competitor.

There may be multiple ways to style an antitrust allegation arising from Google's alleged refusal to list a competitor within Google's organic search results. For example, the allegation might be framed as leveraging Google's alleged market power in an alleged market for search advertising to harm competition in some other market in which Google's competitor and the Google-affiliated business compete.[63] Such an allegation could be framed as raising rivals' costs.[64] Alternatively, the allegation could assert that Google's organic search results are an essential facility.[65] With respect to this latter approach, we agree with Marina Lao and other commentators that application of the essential facilities doctrine is likely to gain little, while risking the diminution of incentives for investment and innovation.[66] To be essential, it is necessary for the facility to be able to deny access to others, but as Marina Lao has pointed out, it is hard to see how one could point to instances in which Google has denied access, given that websites such as Amazon, Trip Advisor, Yelp, Expedia, MapQuest, and others remain highly ranked for certain appropriate keywords.[67]

Regardless of the particular framing of the allegation, we believe that a plaintiff would need to establish two central claims. First, the plaintiff would need to show that competition has been harmed in some well-defined relevant market. For example, a plaintiff might allege a relevant market for a particular type of vertical search. For purposes of discussion only, we assume that there exists such a properly defined relevant market in which both a Google-affiliated business such as Google's Flight Search service[68] and an unaffiliated business such as Cheaptickets.com compete.

Second, for Google's assumed refusal to deal to be anticompetitive, we presume that the plaintiff is required to show that Google's behavior was predatory in that Google's refusal to deal is not competition on the merits but rather would make business sense (i.e., is profit maximizing) for Google only if it resulted in the demise, or severe weakening, of the excluded unaffiliated competitor.[69]

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63 See section VI for why it would analytically incorrect to allege leveraging from a market for organic search alone.

64 See, for example, Thomas G. Krattenmaker and Steven C. Salop, "Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price," 96 *Yale Law Journal* (1986), 209–293.

65 For a discussion of the application of the essential facilities doctrine to search advertising, and an argument that Google's search engine cannot be seen as an essential facility, see Marino Lao, "Search, Essential Facilities, and the Antitrust Duty to Deal," 11 *Northwestern Journal of Technology and Intellectual Property* (forthcoming, 2013), at 19–46.

66 Marino Lao, "'Neutral Search' as Antitrust Basis," at page 5. A noteworthy legal citation is the Court's dicta in *Verizon Communications, Inc. v. Law Offices of Curtis v. Trinko*, 540 U.S. 398, 410-11 (2004).

67 *Id.*, at page 9.

68 <http://www.google.com/insidesearch/features/flights/>

69 This is a variant of the "profit-sacrifice test," which has been debated in the courts and in legal commentary. For an explication of the profit sacrifice test and its value, see A. Douglas Melamed, "Exclusionary Conduct under the Antitrust Laws: Balancing, Sacrifice, and Refusals to Deal" (2006) *Antitrust Law Journal* 73(2) 375–412. For a contrary view, see Steven C. Salop, "Exclusionary Conduct, Effect on Consumers, and the Flawed Profit Sacrifice Standard," 73 *Antitrust Law Journal* (2006), 311–374.

VII.B. Whether Google's assumed refusal to deal harmed competition in a relevant market for vertical search

We now ask whether the act we assume for purposes of discussion only—that Google refused to list its unaffiliated competitor within Google's organic search results—harmed competition in a relevant market for the relevant flavor of vertical search..[70] In theory, such behavior might be deemed predatory under a vertical foreclosure theory.[71] However, this would require a showing that exclusion of a competitive business from placement in Google's search results would lead to actual foreclosure of that competitor. Then we would need to show that such foreclosure ultimately harmed consumers.

First, we note the obvious: Google's assumed refusal to deal—by delisting the unaffiliated competitor from Google's organic search results—certainly harmed that unaffiliated competitor. Google's assumed action deprived the competitor of valuable free publicity. To achieve the same effective level of publicity, the competitor would have to expend greater funds on alternative methods of advertising and promotion; alternatively, the competitor would have to accept lower levels of customer interest and the consequent lower levels of business.

Second, as is well understood, harm to a competitor is not a signal of an antitrust violation any more than harm to a competitor is a signal of intense competition on the merits. In essence, antitrust seeks to protect competition, not competitors.[72] How could the assumed refusal to deal by Google harm competition in a relevant market for a particular type of vertical search? The only impact of this assumed refusal to deal has on the unaffiliated competitor is to deprive it of a particular source of free promotion.

We do not need to consider what the antitrust implications would be if Google's organic search listings were the only mechanism by which competitors in this vertical-search relevant market could promote their businesses, because that is clearly counterfactual. Indeed, it is difficult to see how Google's assumed refusal to list a competitor in its organic search results could foreclose the competitor's access to ways to promote its business given the variety of alternative search engines and the even greater variety of alternative promotional vehicles that are available.

Furthermore, whatever market power Google might have in an assumed search advertising market, it is clear that Google has no such power in broader markets, such as in an alleged market for Internet advertising more generally or, a fortiori, an alleged market for advertising broadly defined. There are many other avenues for companies to promote their businesses other than be listed in Google's organic search results.

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70 As we noted in section VII.A, we take no position on whether there exists a relevant market for any particular type of vertical search. In order to progress in our analysis, however, we assume that there is such a relevant market for the purposes of this discussion only.

71 For an application of the vertical foreclosure approach in a related market, see Hal J. Singer and Daniel L. Rubinfeld, "Vertical Foreclosure in Broadband Access?" (2001) *Journal of Industrial Economics*, Vol. XLIX, No. 3 (September), 299–318.

72 "As Chief Justice Earl Warren wrote more fifty years ago, and as the federal courts have consistently ruled since, the focus of our law is on protecting 'competition, not competitors.'" (Leibowitz Opening Remarks)

Thus, while it is clear that the assumed refusal to deal by Google would hurt the excluded competitor, it is difficult to conceive of a way in which assumed refusal to deal harmed that unaffiliated competitor's ability to compete or harmed competition in the assumed vertical-search relevant market.

VII.C. Whether Google's assumed refusal to deal made business sense only if it injured the unaffiliated business's ability to compete

Suppose that Google considers whether to preferentially elevate the listing for a Google-affiliated business higher than it would be listed if that business were instead unaffiliated with Google, and that this disadvantages an unaffiliated business that competes in the same assumed relevant market for vertical search.

Further suppose that Google judges that the introduction of this non-neutrality into the organic search results will (a) disadvantage its rival but (b) will not restrain the competitor's ability to compete with Google in the vertical-search relevant market.

In light of this further supposition, we would conclude that Google's introduction of non-neutrality into the organic search results constitutes competition not exclusionary behavior.

Thus, a relevant question is whether Google's assumed refusal to deal would make business sense for Google even if the unaffiliated competitor remained a viable competitor in the vertical-search market.

We discussed Google's incentives to introduce such non-neutrality above in section V. Google's decision as to whether to introduce non-neutrality—assuming that non-neutrality is even necessary to justify featuring Google's affiliated business prominently[73]—depends upon the extent to which, if at all, the unaffiliated business is more relevant to the query than is the Google-affiliated business and upon how much the greater prominence of a non-neutral display of the Google-affiliated business would benefit Google's affiliated business but possibly harm its search-advertising business.

If Google were to non-neutrally favor its vertical-search business, the question would be whether the above assessment critically relied on expected harm to the excluded unaffiliated business's ability to compete, or whether Google's assessment would have been the same even if the unaffiliated business would remain viable.

[73] If Google's vertical-search business is just as relevant to the query as is the unaffiliated vertical-search business, Google's algorithms would appropriately display the link to Google's vertical-search business more prominently than the link to the unaffiliated business would be displayed, and this result would not require non-neutrality.