

LEVERAGING MARKET POWER THROUGH TYING: DOES GOOGLE BEHAVE ANTI-COMPETITIVELY?

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I examine Google's pattern and practice of tying to leverage its dominance into new sectors. In particular, I show how Google used these tactics to enter numerous markets, to compel usage of its services, and often to dominate competing offerings. I explore the technical and commercial implementations of these practices, then identify their effects on competition. I conclude that Google's tying tactics are suspect under antitrust law.

JEL Codes: K21; L86

I. INTRODUCTION

In September 2013, web sites buzzed¹ with the news that users would be required to create Google+ social networking accounts to comment on YouTube videos.² There was no obvious reason why a user had to join Google's social network in order to comment on a video. Since the inception of YouTube, users had routinely posted via standalone YouTube accounts. Google claimed that improvements were needed to increase the quality of YouTube comment discussions and to prevent spam, but there was no obvious reason why those features should require the use of Google+. That said, critics quickly saw the strategic implication: While other social networking services were far better established and enjoyed much more success, Google could use its powerful properties, YouTube among others, to pressure users to join Google+.

Google+ was not unusual in benefiting from Google's other offerings. For example, Google established a series of restrictions on mobile phones and tablets, requiring that if a manufacturer sought to install any Google service—such as Maps, YouTube, or the Google Play store for installing other apps from Google and others—the manufacturer had to accept a variety of obligations. For example,

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¹ See, e.g., Selena Larson, *Want To Comment on YouTube? You'll Need a Google+ Account First*, Readwrite, September 24, 2013, readwrite.com/2013/09/24/youtube-google-plus-comment.

² *We Hear You: Better Commenting Coming to YouTube*, YouTube Official Blog, September 24, 2013, youtube-global.blogspot.com/2013/09/youtube-new-comments.html.

the manufacturer had to install *all* the Google apps that Google specified—even if the manufacturer preferred another app. Furthermore, Google required that app icons be placed in prominent locations that Google specified. The device was required to use Google Location Services, even if competitors were faster, more accurate, or more protective of privacy. And manufacturers had to do all this without payment from Google.³ As a result, competing apps struggled to reach users; competitors often resorted to soliciting installations one-by-one, rather than faster and more predictable bulk installations in partnership with device manufacturers.

This paper presents a series of incidents in which Google used similar methods—tying—to expand its dominance into additional markets. For each, I then assess concerns under antitrust law. I present only a portion of Google’s ties, in part because these practices are difficult to uncover or prove.

Because these practices occur worldwide, I do not apply a particular set of legal rules. Rather, I review the current understanding under both US antitrust law and EU competition law, then propose my own test. My rule-of-reason approach balances the anti-competitive effects of tying with offsetting efficiencies—a demanding standard for plaintiffs and competition authorities.

I proceed in three parts. First, I review the standard antitrust treatment of tying. I then present a series of contexts in which Google has tied its new services with its dominant services. For each context, I present key facts, explore the implications for consumers and competitors, then apply antitrust analysis. I conclude with cross-cutting analysis as to effects, implications, and key concerns.

II. THE LAW OF TYING

Tying refers to a seller refusing to provide one product (the “tying” product) unless the buyer also takes another (“tied”) product.⁴ Sellers can implement tying via contractual provisions, or via technology so that the tying and tied product are physically integrated or designed to only work together.

A full treatment of tying exceeds the scope of this paper, particularly because some doctrines are in flux.⁵ Instead, this section briefly presents selected effects and caselaw, then proposes a conservative test.

³ See fn.118 and accompanying discussion.

⁴ Franklin M. Fisher, Innovation and Monopoly Leveraging, in *Dynamic Competition And Public Policy: Technology, Innovation, And Antitrust Issues* 139 (Jerry Ellig ed., 2001).

⁵ For a sampling of views, see, e.g., Erik Hovenkamp & Herbert Hovenkamp, Tying Arrangements and Antitrust Harm, 52 ARIZ. L. REV. 925 (2010); Einer Elhauge, Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory, 123 HARV. L. REV. 397 (2009); David S. Evans & Michael Salinger, Why Do Firms Bundle and Tie? Evidence from Competitive Markets and Implications for Tying Law, 22 YALE J. REG. 37 (2005); Christian Ahlborn, David S. Evans & A. Jorge Padilla, The Antitrust Economics of Tying: A Farewell to Per Se Illegality, 49 ANTITRUST BULL. 287 (2004); Dennis W. Carlton & Michael Waldman, The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries, 33 RAND. J. ECON. 194 (2002); Michael D. Whinston, Tying, Foreclosure, and Exclusion, 80 AM. ECON. REV. 837 (1990).

A. Pros and cons of tying

Tying can provide better, cheaper and more convenient products and services. Shoes have always been sold with laces and cars with tires. Indeed, product integration is fundamental in many industries. For instance, consumer electronics combine functions to reduce cost, size, and energy requirements.

Despite these benefits, tying may have exclusionary effects. First, tying may foreclose competition in a separate, otherwise-competitive market. With dominance in the tying product market, a firm may tie a complementary product to its monopoly product. Then customers can only buy the latter if they also purchase the former, which makes them unwilling to purchase a separate tied product from an independent supplier.

Second, tying may protect dominance in the tying product market. When a monopolist expects successful *tied* product-makers to evolve into *tying* product-makers, it may attempt to foreclose tied-market rivals to prevent or reduce competition in the tying market. For example, the Department of Justice argued that Microsoft tied Windows to Internet Explorer not to profit in browsers, but to protect its dominant operating system (OS) from browser competitors which could become an alternative OS.

B. US and EU Cases on tying

US and EU antitrust caselaw on tying have evolved in different directions.

1. US caselaw

The Supreme Court has taken a strict approach to tying. *Eastman Kodak* applied a quasi-per se rule, finding that a tying arrangement violates Section 1 of the Sherman Act “if the seller has ‘appreciable economic power’ in the tying product market and if the arrangement affects a substantial volume of commerce in the tied market.”⁶ Proving quasi-per se tying requires four elements: the tying and the tied products are separate; the defendant sold the tying product on the condition that the purchaser take the tied product; the defendant has market power in the tying product market; there are non-trivial sales in the tied product market.

Scholarly debate focused on the separate-products test. The Supreme Court in *Jefferson Parish* held that the question of distinct markets “turns not on the functional relation between them, but rather on the character of demand for the two items”—whether consumers seek them separately.⁷

Further debate considered whether efficiency considerations were admissible. The Supreme Court has rejected every efficiency offered to justify tying. In *Jefferson Parish*, the Court recognized that tying may be welfare-enhancing, yet retained a quasi-per se test, finding it too late “to question the proposition that

⁶ *Eastman Kodak Co. v. Image Technical Services, Inc.*, 504 U.S. 451, at 461-62 (1992).

⁷ *Jefferson Parish Hosp. Dist. v. Hyde*, 466 U.S. 2, 15 (1984).

certain tying arrangements pose an unacceptable risk of stifling competition and therefore are unreasonable ‘*per se*’.”⁸ Despite this instruction, the Court of Appeals for the D.C. Circuit held in *Microsoft* that “the rule of reason, rather than *per se* analysis, should govern the legality of tying arrangements involving platform software products.” The Court distinguished the Supreme Court’s tying decisions: “[i]n none of the cases was the tied good physically and technologically integrated with the tying good.”⁹

2. EU caselaw

The European Commission has issued few decisions concerning tying. Best known is its 2004 finding that Microsoft abused its dominant position in the PC OS market by tying Windows with Windows Media Player (WMP). The Commission found that anti-competitive tying requires four elements: the tying and the tied goods are separate products; the undertaking is dominant in the tying product market; the undertaking does not let customers obtain the tying product without the tied product; and the tie forecloses competition.¹⁰

The Commission found that WMP and Windows were separate in light of consumer demand as well as the marketplace which otherwise provided media players separate from OSs.¹¹ Dominance and lack of choice were clear. Examining foreclosure, the Commission called for effects-based analysis, then found that Microsoft’s conduct created anti-competitive effects. On this basis, the Commission condemned Microsoft’s tie of WMP.

In Microsoft’s subsequent appeal, the Commission to the General Court of the EU (GC) largely supported the position of the Commission.¹² The GC’s main departure was a simplification of the Commission’s effects-based approach, finding it sufficient to show that WMP was ubiquitous, which necessarily created an advantage that rivals could replicate.¹³ The GC did not require direct proof that tying caused foreclosure.

C. Proposed test

Because tying can yield efficiencies, I apply a rule of reason analysis as instructed by the D.C. Circuit in *Microsoft*. I consider six questions: Does the defendant have market power on the tying product? Are the tying and the tied product distinct? Are the products tied together? Does the tie foreclose competitors? Does the tie create consumer harm? Are there countervailing efficiencies?

⁸ *Jefferson Parish Hospital Dist. No. 2 et al. v. Hyde*, 466 U.S. 2, 9, 19 (1984).

⁹ *United States v Microsoft Corp.*, 253 F3d 34, 44, 90 (DC Cir 2001).

¹⁰ Commission Decision, 24 March 2004, Case *COMP/C-3/37.792 Microsoft*. § 794.

¹¹ *Id.*, section 5.3.2.1.2

¹² *Microsoft v. Commission*, T-201/04, ECR 2007 II-3601.

¹³ *Id.* at § 1058.

I resolve ambiguities conservatively. When evaluating whether products are separate, I consider multiple factors including functionality, usage, and possible separate demand for each. I do not presume foreclosure effects or consumer harm, and I consider efficiencies when assessing the net effect of a tie.

The essence of this test is the economic effects of a tie—how the tie shapes options and choices for consumers and companies. My methodology is therefore largely business strategy: I examine what Google achieves through tying, and how tying constrains competitors and entrants.

III. REQUIRING USERS TO ACCEPT GOOGLE’S ADDITIONAL SERVICES IN ORDER TO RECEIVE SEARCH

Google’s popular search engine features other Google services prominently and unavoidably. This practice is vulnerable to critique as a form of tying.

A. Facts and Business Analysis

Using Google Search yields Google’s core algorithmic search results along with paid advertisements (Google’s widely-used AdWords service) and, often, links to Google’s related services. As a result, a user wishing to enjoy Search automatically receives not just advertising but also the additional service links Google provides, in whatever proportion and prominence Google chooses. These links send substantial traffic to Google’s other services.

1. Google services benefit from tied promotion

Google has featured most of its new services via prominent placement in search results. Beneficiaries include Google Blog Search, Google Book Search, Google Finance, Google Flight Search, Google Health, Google Hotel Finder, Google Images, Google Maps, Google News, Google Places, Google+, Google Scholar, Google Shopping, and Google Video. In each instance, Google featured its own offering, pushed competing services to less prominent positions, and provided no way for users to “untie” by permanently removing links to Google’s additional service.

Even after tied promotion of Google’s additional services, significant non-Google content typically remains somewhere on the page. But Google often takes the most desirable positions, placing its services at top-left. Scanning the page from top to bottom, left to right, a user sees Google material first. Experts may recognize Google’s insertions, but novices are more likely to click on ads¹⁴ and more likely to be influenced by extra Google results. Moreover, for highly commercial searches such as flights and hotels, the first screen of Google results

¹⁴ Benjamin Edelman and Duncan Gilchrist, *Advertising Disclosures: Measuring Labeling Alternatives in Internet Search Engines*, 24 INFORMATION ECONOMICS AND POLICY 75 (2012).

is often entirely filled with Google services plus advertisements, without few or no algorithmic links.¹⁵

2. Google accentuates the effects of tying through premium formatting

Google provides its own services with special formats unavailable to other sites. For example, Google Maps appears in Google Search with an oversized full-color embedded image.¹⁶ Similarly, Google Shopping appears with a tabulation of product pictures, vendors, and prices.¹⁷ YouTube videos receive thumbnails, a “play” icon, duration information, and other meta-data.¹⁸ Google+ results include author photos, bylines, follower counts, and “more by” links.¹⁹ Even the little-known service Google Health received a distinctive layout and color photos.²⁰

In contrast, competing information services and publishing platforms receive none of these additional features.

B. Antitrust Analysis

For the reasons discussed below, Google’s tied presentation of its additional services is suspect under antitrust law.

1. Market power in the tying product

Google has significant market power in the tying product. It is certainly dominant in the search market (the tying product): Its US search market share exceeds 67%²¹, and exceeds 95% in many countries including most of Europe.²²

Google’s advisors question the existence of a market for algorithmic search results and hence dispute antitrust theories grounded in such a market.²³ They note the two-sided structure of search, using payments from advertisers to provide service to consumers. But an advertising-supported search engine could nonetheless avoid favoring the search engine’s additional services—eschewing the practices in the preceding sections, including favored ranking and special format for its own results.

Google argues that it lacks market power because “competition is one click away,”²⁴ i.e. users have other means to reach competitors. Moreover, Google

¹⁵ Benjamin Edelman and Zhenyu Lai, *Design of Search Engine Services: Channel Interdependence in Search Engine Results*, HBS WORKING PAPER 13-087 (figures 1 and 2).

¹⁶ *Traffic Report: How Google Is Squeezing Out Competitors and Muscling Into New Markets*, Inside Google, June 2, 2010, consumerwatchdog.org/resources/TrafficStudy-Google.pdf.

¹⁷ *Google Product Search Optimization*, E-Commerce Development, January 23, 2010, lc7inc.com/internet-marketing/google-product-search-optimization/.

¹⁸ Benjamin Edelman, *Google as Publisher*, mimeo. (slide 11).

¹⁹ Ian Lurie, *Google Plus Will Build Your Search Traffic*, Portent, February 2, 2012, portent.com/blog/seo/google-plus-will-build-your-search-traffic.htm.

²⁰ Edelman, supra, fn.20.

²¹ comScore, *comScore Releases December 2013 U.S. Search Engine Rankings*, January 15, 2014.

²² Netmarketshare, *Desktop Search Engine Market Share*, netmarketshare.com/search-engine-market-share.aspx?qprid=4&qpcustomd=0, last checked September 28, 2014.

²³ James Ratliff and Daniel Rubinfeld, *Is There a Market for Organic Search Engine Results and Can Their Manipulation Give Rise to Antitrust Liability?*, 3 JOURNAL OF COMPETITION LAW & ECONOMICS 517 (2014).

²⁴ Google U.S. Public Policy, google.com/publicpolicy/issues/competition.html.

points out that the services are free to users, which purportedly prevents harm to consumers. But these defenses do not fully address concern about Google's market power: Even if consumers *could* access other services, defaults matter, and they typically do not.²⁵ Moreover, Google's zero-price service to consumers can exacerbate impediments to competition. If users had to pay to use Google services, competitors could offer a cheaper price, inducing users to try a new service that might be unattractive if it merely matched Google's price. In contrast, by foregoing a direct charge to users, Google leaves no room for competitors to offer lower prices.

2. A tie

Google imposes a tie. Users can only obtain Google search results together with whatever additional links Google elects to present. There is no way for users to avoid links to Google's additional services while still receiving Google search.

Google argues that nothing forces users to click on links to its additional services.²⁶ Indeed, users could ignore those links. But prominence matters: when presented with links to Google's services, users proceed accordingly.²⁷ The prominent presentation implements a *de facto* tie.

Google's tie is strengthened by the structure of users' decisions. With every search, a user must decide to click (or ignore) Google's additional services. A user cannot simply forego a Google service once in permanent favor of a competitor. Rather, in every subsequent search, the user must affirmatively ignore Google's prominent offerings, and find less prominent links to another service (or type in the service's domain name and run additional searches to find the desired content there). On computers, phones, and tablets, users can express long-term preferences by installing apps and changing file associations, but Google offers no such mechanism to accommodate users' preferred information services.²⁸

Google's tie is further strengthened by the thought process required for users to reject Google's prominent links to its own services. To decline a Google link and seek out an alternative, a user must switch from habitual, automatic activity to deliberate activity.²⁹ Psychology research reveals this switch to be difficult.³⁰ The switch is particularly impractical because it must be repeated for each of dozens of daily searches.

Google might also argue that concerned sites can undo any harm from the tie by buying advertising—standard Google AdWords ads or the “Rival Link”

²⁵ Inside Google, *supra*.

²⁶ Follow-up Questions for the Record of Eric Schmidt before the Senate Committee on the Judiciary, September 21, 2011 (Kohl question 1.b).

²⁷ See Sec.III.B.4.i.

²⁸ For implementations, see fn.65.

²⁹ Adam Candeub, “Behavioral Economics, Internet Search, and Antitrust.” 9 I/S: A JOURNAL OF LAW AND POLICY FOR THE INFORMATION SOCIETY (2014).

³⁰ *Id.*

mechanism that Google proposed in Europe.³¹ But these options entail payment to Google, further exacerbating the asymmetry between Google and competitors.

3. Tying and tied products are distinct

Google argues that its additional service search results “are *not* separate ‘products and services.’”³² Google may consider the additional services part of search, but the services are distinct for antitrust purposes. For instance, Maps and News are distinct from Search because they offer different functionalities and are not interchangeable from a consumer’s perspective. Moreover, a substantial number of users rely on services from other vendors³³ even if, as discussed below, they may be less inclined to do so as a result of a tie. For example, users often do—and historically always did—search maps and news on specialized sites.

4. Foreclosing competition

There is strong evidence that Google’s tie hinders competition in the markets for the tied products.

i. Google benefits from favoring its own additional services

Users heavily favor clicks on the top-most search result.³⁴ By tying Google’s additional services to Google’s algorithmic search results and favoring these services with preferred placement and format, Google increases the chances that users will see and use these services. Google thereby eliminates users’ incentive to search for offerings from other companies.

By all indications, Google’s additional services reap substantial benefits from featured placement in Google Search. For example, prominent placement in Search seemed to help Google Maps overcome the disadvantage of its late entry and incumbents’ strong position; Google Maps first became available in 2005, whereas Mapquest began in 1996.³⁵ Despite Google Maps’ technical advances,³⁶ its usage remained sluggish until Google began presenting Google Maps directly within Search results.³⁷ These prominent placements precipitated Google Maps’ growth: Its traffic tripled while traffic to competitors fell by half.³⁸

Google Shopping similarly benefited from Search referrals: ComScore data reveals that its traffic more than doubled when it appeared within Search.³⁹

³¹ *Commitments in Case COMP/C-3/39.740 – Foundem and Others*, January 31, 2014.

³² Follow-up Questions for the Record of Eric Schmidt, Kohl question 1.a (emphasis in original).

³³ Inside Google, *supra*.

³⁴ *The Value of Google Result Positioning*, Chitika, June 7, 2013, chitika.com/google-positioning-value.

³⁵ Alan Cohen, *A MapQuest Road Trip*, PC Magazine, June 17, 2003.

³⁶ Maryanne Murray Buechner, *50 Coolest Websites 2005: In A Class By Themselves*, Time, June 20, 2005.

³⁷ Heather Hopkins, *Google Maps Making Inroads Against Leader, Mapquest*, Hitwise Intelligence, January 9, 2008, weblogs.hitwise.com/us-heather-hopkins/2008/01/google_maps_making_inroads_aga.html.

³⁸ Inside Google, *supra*.

³⁹ *Id.*

ii. *Favored treatment accentuates the effects of the tie*

Google increases the impact of its ties through its control over the format, placement, and certainty of search results.

a. *Premium placement assures favorable expectations for service adoption*

Through premium placement of its additional services in search results, Google can often overcome the “chicken and egg” problem that hinders the launch of many online services. Typically, services need to mobilize multiple groups simultaneously. For example, an online marketplace needs both consumers (interested in making purchases) and sellers (providing available products and perhaps paying to advertise). Such services typically begin with few consumers, which hinders efforts to attract advertisers and discouraging entry.

Most companies struggle to overcome these challenges. Some buy pay-per-click advertising to obtain users, but at high cost and a risk of Google withholding traffic or raising prices.⁴⁰ Others hope to receive algorithmic traffic, but that is notoriously unreliable because Google can change search algorithms at any time, both for routine improvements and to divert traffic to a new Google service.⁴¹ Still others begin with few users and hence few advertisers, thus particularly low early revenue which further impedes mobilizing the multiple types of users needed.

In contrast, by tying its additional services to search results and giving them prominent placement, Google grants these services ample free traffic and thereby reduces launch barriers. For example, shortly after the launch of Google Finance, 57% of its traffic came from Google Search.⁴² Moreover, publishers and advertisers recognize and anticipate this tactic, yielding favorable assessments of the prospects of a new Google service. Expectations for competitors’ success are lowered in light of the advantages Google claims for itself.

Publishers’ responses to Google+ confirms the powerful role of expectations in shaping usage of new Google services. As Google granted preferred placement to content on Google+, self-interested publishers saw a way to obtain additional traffic. One publisher explained: Google+ may be “evil,” but “it’s a huge opportunity.” In particular, by embracing Google+, this publisher obtained significant traffic for important keywords.⁴³ Furthermore, sophisticated publishers correctly *anticipated* that Google would grant these benefits to Google+ participants. For instance, another publisher encouraged colleagues to “use

⁴⁰ For example, UK comparison shopping site Foundem bought traffic from Google for this reason, then suffered a large price increase. *Foundem’s Google Story*, Searchneutrality.org, August 18, 2009, searchneutrality.org/eu-launches-formal-investigation/foundem-google-story.

⁴¹ Sarah Needleman, *Sites Retool for Google Effect*, Wall Street Journal, April 21, 2011.

⁴² Bill Tancer, *Google Finance – After the Redesign*, Hitwise Intelligence, December 15, 2006, weblogs.hitwise.com/bill-tancer/2006/12/google-finance-after-the-redes.html.

⁴³ Lurie, *supra*.

Google+ to bring traffic to your website by the boat load,” weeks before Google began intensely favoring Google+ results.⁴⁴ These and other publishers choose to use Google+ not because it was genuinely superior, but because of the traffic Google provided to Google+ users—a benefit no other platform could match.

b. By favoring its own services, Google withholds traffic from competitors

When Google features its own services, fewer clicks flow to incumbents and new entrants.⁴⁵

By favoring its additional services, Google risks foreclosing the entry of potential competitors and accelerating exit of current competitors. In Senate testimony in September 2011, Yelp CEO Jeremy Stoppelman said “there’s no way” he would have started Yelp, or a business using a similar strategy, if Google had been engaging in the favored placement of its own services in the way that has become Google’s routine. The CEO of Nextag agreed.⁴⁶

It is difficult to identify the business plans rejected and businesses not launched due to these concerns. But managers, investors, and entrepreneurs confirm grave concern about the danger of Google favoring its own offerings.⁴⁷ Meanwhile, the humor web site “What If Google Does It?” presents the worry of entrepreneurs who see Google’s entry as a key risk.⁴⁸

c. Certain placements accentuate Google’s benefits from the tie

Google grants its additional services the benefit of *certain* placement. Thus, Google’s services can be confident in their traffic projections—allowing them to plan budgets, advertising sales, hardware requirements, and overall strategy.

In contrast, ordinary sites have little assurance of receiving algorithmic search traffic from Google. Rankings can change for no apparent reason. Indeed, companies have resorted to layoffs after their algorithmic search traffic dropped unexpectedly.⁴⁹ Thus, most companies hesitate to build business plans around algorithmic search traffic.

⁴⁴ Chris Keller, *Use Google Plus To Bring Traffic To Your Website By The Boat Load*, Profitworks, December 24, 2011, profitworks.ca/blog/918-search-engine-optimization/308-use-google-plus-to-bring-traffic-to-your-website.

⁴⁵ See e.g. Inside Google, *supra*, as to traffic diversion in maps. See also Chitika, *supra*.

⁴⁶ “The Power of Google: Serving Consumers or Threatening Competition?” (transcript), Senate Committee on the Judiciary, September 21, 2011.

⁴⁷ See e.g. Brian S. Hall, *Google Are Pussies*, August 3, 2011, preserved at web.archive.org/web/*/http://brianshall.com/content/google-are-pussies. See also Danny Sullivan, *The Growing Portrait Of Google As A Big, Scary, Expanding Everywhere Copy Monster*, Search Engine Land, August 7, 2011 (critics believe that Google impedes other companies’ efforts, although author disagrees). See also Yelp and Nextag CEOs’ oral testimony, *supra*.

⁴⁸ *What If Google Does It?* whatifgoogledoesit.com.

⁴⁹ Needleman, *supra*.

iii. Foreclosure effects in total

Google uses tying to grant its services a cost advantage (no-cost traffic), as well as superior non-price terms (format and certainty). As a result, other sites struggle to get traffic that Google gives itself with ease. Other sites cannot resort to advertising: they can only buy it if Google elects to sell it; Google can raise prices sharply; listings are labeled as advertisements and are thus less attractive to those users who view ads unfavorably.

Google's conduct also impedes entry. By creating the perception that it will withhold traffic from new services, Google deters such services from being formed, raising capital, and attracting advertisers. Conversely, by perpetuating the widespread view that Google's offerings will succeed, Google can coordinate users, advertisers, content providers, and others around its services.⁵⁰

5. Harm to consumers

By tying its additional services to Search, Google increases usage of its additional services, even if competitors' offerings might otherwise be preferable. It is often difficult to determine which site is objectively "best," but Google Shopping price search offers a notable exception, tellingly directing users to advertisers whose prices are higher than average, rather than low-priced firms that decline to buy costly Google advertising.⁵¹ Further evidence of consumer preference comes from patterns in consumer adoption. If services were chosen for their intrinsic value, prominent placement would have little effect. But both Google Maps and Google Shopping grew popular only when prominently featured within Search,⁵² which supports an inference that usage came from tied presentation, not intrinsic merit.

Google's inaccurate or misleading statements about results also support an inference of harm. Google promised "objective"⁵³ "unbiased"⁵⁴ results with "no manual intervention... decided by our algorithms..., not manually by us."⁵⁵ Google co-founder Sergey-Brin said that Google's "approach to search" is "fully

⁵⁰ David Evans, *Economics Of Vertical Restraints For Multi-Sided Platforms*, 626 UNIVERSITY OF CHICAGO INSTITUTE FOR LAW AND ECONOMICS WORKING PAPER (2013).

⁵¹ Consumer Watchdog, *Consumers are Charged More as a Result of Google's Search Monopoly*, November 25, 2013, consumerwatchdog.org/resources/googlereport112513.pdf.

⁵² Inside Google, *supra*.

⁵³ Lucinda Barlow, *Hey! My Site Disappeared!*, Official Google Australia Blog, January 16, 2010, google-au.blogspot.com/2010/01/hey-my-site-disappeared.html.

⁵⁴ Google Code of Conduct, <http://investor.google.com/corporate/code-of-conduct.html>.

⁵⁵ Amit Singhal, *Introduction to Google Ranking*, Google Official Blog, July 9, 2008, googleblog.blogspot.com/2008/07/introduction-to-google-ranking.html.

automated.”⁵⁶ These public statements may be presumed to be material, yet experience and occasional Google admissions⁵⁷ reveal them to be inaccurate.

Further harm comes from reducing choices for advertisers and raising advertising prices. Advertisers are the sole source of revenue in affected markets. By pulling traffic to Google services, Google reduces advertisers’ choices—increasing advertisers’ dependence on Google and reducing the competitive constraint posed by other advertising venues. In particular, competing information services are partial substitutes, so Google has an incentive to raise prices throughout when it controls more sectors.⁵⁸

Increased advertising prices create harm to end-consumers. When Google raises advertising prices, advertisers substantially pass those higher costs on to consumers (according to the relative elasticity of supply and demand⁵⁹).

To the suggestion that advertisers have been harmed, Google argues that advertising prices are set through an auction. Thus, Google argues, its policy changes are incapable of affecting prices.⁶⁰ But Google’s auction defense is unpersuasive. For one, it is not clear that, as a matter of law, Google truly runs an auction: Google’s Terms & Conditions nowhere promise to use auctions⁶¹; in other litigation, Google has challenged advertisers’ reliance on Google’s statements (in web pages, videos, and otherwise beyond T&C’s) as extrinsic to the contract⁶²; and Google imposes advertiser-specific adjustments⁶³ and reserve prices⁶⁴ that let Google’s unilateral action, not competitors, set advertising prices. Moreover, to the extent that auctions set prices, Google shapes advertisers’ options both within and outside the auction. In particular, dominating other sectors allows Google to reduce advertisers’ alternatives—increasing the amount of advertising that advertisers seek to buy from Google, and increasing their willingness to pay to do so. That such ads are sold via auction, rather than posted prices, does not dull the harm from advertisers’ dependence on a single firm.

⁵⁶ *Hungry Minds.com Chooses Google as Exclusive Provider of Site Search*, November 15, 1999. For similar statements, see Benjamin Edelman, *Hard-Coding Bias in Google “Algorithmic” Search Results*, November 15, 2010. benedelman.org/hardcoding/.

⁵⁷ Marissa Mayer Remarks at Google Seattle Conference on Scalability, June 23, 2007, [youtube.com/watch?v=LT1UFZSbcxE#t=44m50s](https://www.youtube.com/watch?v=LT1UFZSbcxE#t=44m50s) (at 44:50).

⁵⁸ Itai Ashlagi, Benjamin Edelman, and Hoan Soo Lee, *Competing Ad Auctions*, HBS WORKING PAPER 10-055, 2010.

⁵⁹ Michal Fabinger and Glen Weyl, *Pass-Through as an Economic Tool: Principle of Incidence under Imperfect Competition*, 121(3) *JOURNAL OF POLITICAL ECONOMY*, 528 (2013).

⁶⁰ Google U.S. Public Policy, *supra*. (at “Advertisers have many choices in a dynamic market”)

⁶¹ Google AdWords Terms and Conditions, <https://adwords.google.com/select/tsandcsfinder>.

⁶² Motion to Dismiss First Amended Complaint, *Rick Woods v. Google, Inc.* 5:11-CV-01263-EJD. N.D.Cal. Docket number 73.

⁶³ *Check and Understand Quality Score*, Google, support.google.com/adwords/answer/2454010.

⁶⁴ *Is there a bid requirement to enter the ad auction?*, Google AdWords Help, support.google.com/adwords/answer/105697.

6. Lack of countervailing efficiencies

Countervailing efficiencies do not negate these harms. Google argues that its integrated results offer important consumer benefits—for example, helping users reach desired destinations faster or with a single user interface. These benefits only occur, Google argues, when Google presents information through its own services rather than directing users to external publishers.

These efficiency arguments are unconvincing. Some of Google’s additional services advance short-run user preferences; for example, users benefit from maps when searching for hotels or restaurants. But users do not necessarily prefer a *Google* map. Google could easily present competitors’ services in the same way that it presents its own.⁶⁵

IV. REQUIRING WEB SITES TO PARTICIPATE IN GOOGLE’S ADDITIONAL SERVICES IN ORDER TO PARTICIPATE IN ALGORITHMIC SEARCH

If a site wants to be included in Google Search results, Google sometimes requires that the site allow Google to excerpt and present its material in other ways. This tactic is vulnerable to critique as a form of tying.

A. Facts and Business Analysis

The following subsections present examples of Google requiring sites to participate in Google’s additional services in order to appear in Google Search.

1. Mixed and muddled publisher opt-out procedures at Google News

Google News brought the first instance of publishers seeking to participate in only some of Google’s offerings. Launched in 2002, News links directly to selected articles from various news sites—a concern for publishers who worried that users would choose articles via News rather than via publishers’ home pages, reducing users’ loyalty to local publishers. Some publishers therefore sought to remove their articles from News: They hoped to discourage loyal readers from relying on News, and they did not want to contribute to the growth of News.

Some publishers worried that if they opted out of Google News, they would also be removed from Google’s primary index of web pages and thus from Search.⁶⁶ Even search industry experts were unsure what would happen.⁶⁷ Google’s policies changed over time, and its public statements were at best inconsistent. For example, Google’s blog entries in 2009 repeatedly emphasized

⁶⁵ Benjamin Edelman, *Remedies for Search Bias*, February 22, 2011, benedelman.org/news/022211-1.html (at “Experience from Browser Choice”); Benjamin Edelman and Zhenyu Lai, *Comments on Commitments in AT.39740*, benedelman.org/publications/comment-edelman-lai-to-dgcomp-28may2013.pdf (Section E); “Focus on the User”, 2012, web.archive.org/web/*/http://www.focusontheuser.org/ (plug-in modifying the presentation of Google results to give equal treatment to competitors).

⁶⁶ Eric Pfaner, *Italian Regulators Investigating Google*, New York Times, August 27, 2009.

⁶⁷ Danny Sullivan, *Debunking The Italian Newspapers’ Antitrust Allegations Against Google*, Search Engine Land, August 27, 2009 (three separate and contradictory postscripts as to partial opt-outs).

that publishers could withhold content from Google, but said nothing about remaining in Search while eschewing News.⁶⁸ One expert concluded that the standard robots.txt mechanism would not let a publisher leave News but stay in Search; rather, the publisher would need to find a little-known form on the Google site.⁶⁹

It seems that a sophisticated publisher could at all times decline News while remaining in Search. Thus, Google never literally tied the services together. Yet Google created extended confusion and ambiguity. From a publisher's perspective, the services were *effectively* tied: publishers could not easily determine how to stay in Search but leave News. Moreover, publishers feared retaliation by Google.⁷⁰ The absence of a safe, well-documented opt-out caused publishers to conclude that News was inevitable, which reinforced their conclusion that their best choice was to participate.

2. Google Search tied to publishers' participation in Google Places

Historically, Google insisted that certain sites provide content to Google Places in order to remain in Google Search. Launched in 2010, Places consolidates the information Google finds on the web about a place.⁷¹ Source sites disliked Google copying the information they posted, arguing that they incurred costs to assemble reviews and other content, but Google gave little value in return. Meanwhile, if a site declined to participate in Places, Google removed the site from its algorithmic search index and withheld valuable Search traffic.⁷²

Google argued that it used only excerpts and that it attributed each quote to its source site, but source sites found these efforts inadequate. For one, Google's design discouraged users from clicking from Places to the underlying sources. For example, during fall 2011, Google's links to sources did not look like hyperlinks. For one, the links were grey, a color usually used to mark unimportant labels. On these pages Google otherwise used grey only to present non-clickable details such as review date and distance from a transit stop. In contrast, standard links are green or blue.) Furthermore, unlike most hyperlinks, Google's source links lacked underlining. Sometimes Places failed to link or credit a source at all.⁷³

⁶⁸ Josh Cohen, *Working with News Publishers*, Google Public Policy Blog, July 15, 2009, googlepublicpolicy.blogspot.com/2009/07/working-with-news-publishers.html. See also Cohen, Josh, *FTC Looks at the Future of News*, Google Public Policy Blog, December 1, 2009, googlepublicpolicy.blogspot.com/2009/12/ftc-looks-at-future-of-news.html.

⁶⁹ Sullivan, August 27, 2009, *supra*.

⁷⁰ Chloe Albanesius, *Google to Reindex Belgian Newspapers Amidst 'Boycott' Complaints*, PC Magazine, July 18, 2011.

⁷¹ Jason Kincaid, *TechCrunch Interview: Marissa Mayer Reveals the Two Pillars of Google's Local Strategy*, TechCrunch, May 5, 2011.

⁷² Statement of Thomas O. Barnett, Senate Judiciary Committee, Hearing on Competition in Online Markets / Internet Search Issues, September 21, 2011. See also Testimony of Jeremy Stoppelman, Senate Committee on the Judiciary, September 21, 2011.

⁷³ Erick Schonfeld, *Google Places Now Borrowing Yelp Reviews Without Attribution In iPhone App*, TechCrunch, June 1, 2011.

By January 2012, Google began to reference other review services with standard blue links. Moreover, Google's December 27, 2012 commitments to the FTC required allowing publishers to remove their content from Shopping, Local, Flights, Hotels, and Advisors without penalty in Search.⁷⁴ But by this point, the tie had already taken hold: Users provided reviews directly to Places, reducing Google's need to copy reviews from other sites.

B. Antitrust Analysis

Google's tying of participation in additional services to participation in web search is suspect under antitrust law.

1. Market power in the tying product

Google has market power in the tying product market, algorithmic search. See Sec.III.B.1.

2. A tie

Google imposes a tie between publishers' participation in Search and their participation in other Google services (including News, Places, and Local). As to news publishers, Google's tie was *de facto* for lack of any well-documented way for publishers to obtain Search placement without News. As to Places and Local, sworn statements of review site executives and counsel indicate that Google's rules were explicit: Google required TripAdvisor and Yelp to provide material to Local if they wanted to remain in Search.

The practices at issue vary somewhat from classic tying as practiced in retail sales. Here, Google's tie targets suppliers rather than buyers. Yet the structure of Google's two-sided market—processing information from sites and providing information to consumers—makes both publishers and consumers “customers” to Google. Furthermore, in other contexts competition law properly considers both upstream and downstream relationships of a dominant firm (e.g. monopsony and monopoly). Though distinct from classic ties, Google's dealings with publishers fall within the realm of tying: Google conditions a desired product on an unwanted product, thereby leveraging power in one market to expand elsewhere.

3. Tying and tied products are distinct

Google Search is distinct from News, Places, and Local. For one, Google's contracts distinguish the products: When initially licensing Yelp reviews, the contracts referenced “Google Local”⁷⁵—confirming that Google then saw Local as separate from Search.

The tying and tied products are also distinct from the perspectives of consumers and publishers. Consumers can use these services (and competitors) in

⁷⁴ David Drummond, “RE: Google Inc., File No. 111-0163” (Letter to FTC Chairman Jon Leibowitz), December 27, 2012, google.com/pdf/google_ftc_dec2012.pdf.

⁷⁵ Stoppelman, *supra*.

any combination. Publishers treat these services as separate in seeking to participate in some but not others.

Google would argue that it uses an integrated system to collect data from all manner of web sites—for example, a single set of crawlers for Search, News, and more. But Google labels its crawlers with diverse user-agents that indicate their specific functions,⁷⁶ which counters any suggestion of an all-purpose crawler. Crawlers arrive with differing frequencies and behavior, including examining different pages at different speeds. Google's uses of the resulting data are equally diverse, calling for different processing and presentation.

4. Foreclosing competition

When Google ties publishers' participation in its additional services to their participation in search, Google blocks competition in affected markets. Competing publishers made significant investments to develop content that consumers value; for example, Yelp recruited reviewers with parties, coaching, and a community. To sustain that investment, publishers need traffic and advertising revenue. Google impedes competition when it exploits others' investments rather than developing its own content.

Furthermore, Google's actions are likely to deter entry. Whatever new content or improvements entrants devise, Google threatens to copy their material into the corresponding Google services—denying would-be entrants a meaningful opportunity to recoup their investments. Notably, prior to the practices at issue, Google had reportedly sought to buy Yelp.⁷⁷ If Google can copy a publisher's content, the publisher faces significant pressure to accept Google's offer—even at a modest valuation. Anticipating reduced valuations even for successful services, prospective entrants have less incentive to begin operations.

Google's actions also harm news publishers and deter entry into online journalism. News publishers anticipate that their work will be cherry-picked by Google News, which sends readers to selected stories but hinders a successful publisher's aspiration to become a user's primary source of news.

5. Harm to consumers

As in Sec.III, the markets at issue are funded by advertisers which are harmed when Google withholds traffic from competing advertising venues. For example, if Google directs users to Places, independent sites will have less traffic, which increases advertisers' reliance on Google and increases Google's pricing power.

⁷⁶ *Google Crawlers*, Webmaster Help, support.google.com/webmasters/answer/1061943 (listing nine different labels).

⁷⁷ Michael Arrington, *Google In Discussions to Buy Yelp for Half a Billion Dollars Or More*, TechCrunch, December 17, 2009.

Google argues that advertising markets are broad and competitive⁷⁸ and would argue that diverting users from review sites to Google Places has a trivial effect on online advertising as a whole. But for specific classes of advertisers, Google's actions towards news and review sites have significant effects. For example, a vibrant restaurant review site is a natural venue for restaurant advertising, hence a plausible competitor to Google's dominant AdWords service. Similarly, TripAdvisor naturally serves hotels, attractions, and other travel-related vendors. If Google can take significant traffic from these sites, it reduces advertisers' ability to shift spending to alternatives with lower prices or more favorable terms.

6. Lack of countervailing efficiencies

In a Congressional hearing in which witnesses criticized Google for copying publishers' material, Chairman Eric Schmidt largely declined to defend the requirement that sites offer material to all Google services if they participate in any. His written testimony noted Google's goal to "provide the most relevant answers as quickly as possible."⁷⁹ Google's service to consumers typically improves as content is added. But Google proves too much in arguing that short-term user benefits are sufficient grounds for copying: That reasoning would give Google *carte blanche* to exploit content otherwise available only by paid license.

Notably, Schmidt offered no technical justification for tying the services. For example, there is no suggestion that Google's engineers found it difficult to use a publisher's material for some purposes but not others. Nor would Google face unreasonable administrative costs in using a publisher's material only for specific services.

V. REQUIRING ADWORDS ADVERTISERS TO ACCEPT ADDITIONAL GOOGLE ADVERTISING SERVICES THROUGH REQUIREMENTS OR DEFAULTS

Google sells text advertisements that appear adjacent to algorithmic results in Google Search, a service now known as AdWords. Google has attracted an unmatched arsenal of more than one million advertisers,⁸⁰ and AdWords is Google's primary source of revenue.

As Google launches new advertising services, it typically includes existing AdWords advertisers either as a requirement (for continued participation in AdWords) or by default (with an optional to decline; but with the change disclosed in a place or manner where few advertisers notice or respond). This tactic is vulnerable to critique as a form of tying.

⁷⁸ Google U.S. Public Policy, *supra*.

⁷⁹ Written Testimony of Eric Schmidt before the Senate Committee on the Judiciary, September 21, 2011.

⁸⁰ Miguel Helft., *Google: 1 Million Advertisers in 2007, More Now*, New York Times, January 8, 2009.

A. Facts and Business Analysis

Google has repeatedly required advertisers to accept new advertising services in order to buy AdWords advertising, hence tying these services to AdWords. The following sections provide six examples.

1. AdSense automatic opt-in

In June 2003, Google launched AdSense, placing advertisements onto third-party publisher sites. These placements offer additional exposure but significant risks. For one, publishers have incentive to click their own ads, inflating advertisers' costs.⁸¹ Furthermore, advertisers find some AdSense publishers unsuitable (e.g. adult material or copyright infringement). For these and other reasons, many advertisers would have declined AdSense placements had they been asked to choose.

Instead, Google simply enrolled all AdWords advertisers into AdSense. To decline, an advertiser needed to invoke a new account configuration option.⁸² Google thus assured an early stable of advertisers with relevant advertisements to place on any page, on any subject.

In contrast, competing services struggled to attract advertisers. Without sufficient advertisers, they often lacked optimal advertisements, yielding lower payment to publishers and difficulty attracting publishers. In 2010, Yahoo closed its AdSense competitor, Yahoo Publisher Network.⁸³ Microsoft's offering, pubCenter, remains small.

2. Domain parking required purchases and automatic opt-in

By 2005, Google placed advertisements onto "parked domains"—undeveloped web pages that show only advertisements.⁸⁴ Many advertisers disfavor parked domains because users reach them by accident, they often infringe trademarks, and they can facilitate traffic laundering and click fraud.⁸⁵

Through at least 2007, Google placed ads onto parked domains automatically. To be removed, an advertiser had to contact its AdWords account representative and submit a special request for manual processing. This procedure was not mentioned in any Google help page, and advertisers reported receiving "the run around" when rejecting parked domain placements.⁸⁶

⁸¹ Ken Wilbur and Yi Zhu, *Click Fraud*, 28 *MARKETING SCIENCE* 293 (2009).

⁸² Brian Morrissey, *Google Starts Self-Service for Content Ads*, *ClickZ*, June 18, 2003.

⁸³ Robin Wauters, *Yahoo Publisher Network To Be Axed, Customers Referred To Chitika Instead*, *TechCrunch*, March 31, 2010.

⁸⁴ Google DomainPark, 2004, [web.archive.org/web/20040215000000*/http://www.google.com/domainpark/](http://www.google.com/domainpark/).

⁸⁵ Benjamin Edelman and Tyler Moore, *Measuring the Perpetrators and Funders of Typosquatting*, *Proceedings of the Fourteenth International Conference on Financial Cryptography and Data Security, LNCS Vol. 6052*, 2010.

⁸⁶ Gary Przyklenk, *Exclude Those Content Network Parked Domain Ads*, *PPC Advice*, October 23, 2007, ppc-advice.com/2007/10/23/exclude-those-content-network-parked-domain-ads/.

In 2009, Google added a checkbox for advertisers to decline placements on parked domains.⁸⁷ But by then, Google's parking service was well-established and had become the largest source of earnings for domain parkers.⁸⁸ Furthermore, placements on parking sites reinforced Google's lead in search advertising.

3. Other undesirable Google Search Network placements

If an advertiser wants placements in any portion of Search Network, Google requires the advertiser to accept placements throughout the entire Search Network.⁸⁹ Search Network includes numerous undesirable partners including sites engaged in click fraud,⁹⁰ toolbars that trick users into running searches they did not intend and that present advertising where users expect organic results,⁹¹ and all manner of malware and adware.⁹² But Search Network also includes desirable advertising locations such as AOL Search.⁹³ Advertisers must buy all of Google Search Network to get, e.g., AOL Search.⁹⁴

4. Mobile placements automatic opt-in

In December 2008, Google began to place AdWords advertisements onto mobile devices. Google described these placements as "a new ... option," but Google set advertisers' accounts to automatically accept unless an advertiser specifically requested otherwise.⁹⁵ Most advertisers had designed landing pages and set AdWords bids anticipating desktop computers and laptops with full-size screens and keyboards for users to examine items and enter order details. In contrast, mobile devices yielded weaker performance due to limited device capabilities. Mobile app store Appitalism estimated that unwanted mobile placements cost advertisers hundreds of millions of dollars.⁹⁶ Advertisers could reverse the automatic opt-in, but Google did not alert advertisers to the opportunity to do so.

Unexpected mobile placements were particularly costly to advertisers because, especially at the outset, mobile browsers did not appear in advertisers'

⁸⁷ John Lee, *Yes Friends, Google AdWords' Search Partners Includes Parked Domains*, PPC Hero, April 23, 2009, ppchero.com/friends-google-adwords-search-partner-includes-parked-domains/.

⁸⁸ Edelman and Moore, *supra*, Table 2.

⁸⁹ *About the Google Search Network*, support.google.com/adwords/answer/1722047.

⁹⁰ Benjamin Edelman, *Google Click Fraud Inflates Conversion Rates and Tricks Advertisers into Overpaying*, January 12, 2010, benedelman.org/news/011210-1.html.

⁹¹ Benjamin Edelman, *IAC Toolbars and Traffic Arbitrage in 2013*, January 22, 2013, benedelman.org/news/012213-1.html.

⁹² Benjamin Edelman, *Google Still Charging Advertisers for Conversion-Inflation Traffic from WhenU Spyware*, January 5, 2010, benedelman.org/news/010510-1.html.

⁹³ Bill Dean, *Study: AOL Gets Highest Conversion Rate for January*, Direct Marketing News, February 16, 2006.

⁹⁴ Nicholas Carlson, *AOL and Google Renew Search Deal through 2015*, Business Insider, 2010.

⁹⁵ Alexandra Kenin, *New AdWords Options for iPhone and G1*, *Google Mobile Blog*, December 8, 2008, googlemobile.blogspot.com/2008/12/new-adwords-options-for-iphone-and-g1.html.

⁹⁶ Simon Buckingham, *When Google Decided for its Advertisers to Retrospectively Widen the Campaign Settings for All Existing Ads*, Appitalism Blog, March 14, 2010, appitalism.com/blog/?p=46.

traffic reports. Early mobile devices often lacked support for JavaScript, yielding large and systematic errors in Google Analytics reports of mobile users.⁹⁷

5. Enhanced Campaigns add compulsory tablet placements and convoluted mobile opt-out

In summer 2013, Google reinforced the tie of mobile and tablet advertising placements through a compulsory new bidding structure it called Enhanced Campaigns. Google touted targeting and management benefits,⁹⁸ but advertisers flagged problems. In particular, Google insisted that each advertiser submit a single bid for computers, tablets, and smartphones⁹⁹ although research revealed that the devices vary in their value to advertisers.¹⁰⁰ Previously, advertisers activated a simple checkbox to exclude smartphones, but Enhanced Campaigns substituted a multiplier—requiring a counterintuitive “-100%” entry.¹⁰¹

For advertisers who disliked tablet placements or sought to submit different bids for computers versus tablets, Enhanced Campaigns were particularly disruptive: Google required a single bid for both computers and tablets, without adjustment for their differing value.¹⁰² Thus, Google could send computer versus tablet users in whatever ratio Google chose to provide.

6. YouTube Promoted Videos automatic opt-in

Google’s “Promoted Videos” feature lets video creators pay to present videos to users. Initially, Promoted Videos appeared only within the YouTube site. In November 2009, Google began to place Promoted Videos on third-party sites¹⁰³ without advertisers’ specific approval.

Placements on third-party sites raise concerns for advertisers for the same reasons flagged for AdSense. An advertiser not expecting such traffic would have no reason to measure the problem or build defenses.

B. Antitrust Analysis

Google’s tying of participation in new advertising services to participation in sponsored search is suspect under antitrust law.

⁹⁷ Bryson Meunier, *Mobile Analytics with Google Analytics*, Natural Search and Mobile SEO Blog, February 21, 2009, brysonmeunier.com/mobile-analytics-with-google-analytics/.

⁹⁸ Andy Miller, *Get a Head Start with Enhanced Campaigns: Why to Upgrade Now*, Inside AdWords, June 10, 2013, adwords.blogspot.com/2013/06/get-head-start-with-enhanced-campaigns.html.

⁹⁹ Pamela Parker, *Google’s Enhanced Campaigns Inspire Love, Hate And Hope For The Next Version*, Search Engine Land, February 7, 2013.

¹⁰⁰ Sid Shah, *Q2 2012 Global Digital Advertising Update*, Adobe Digital Marketing Blog, July 24, 2012, blogs.adobe.com/digitalmarketing/digital-marketing/q2-2012-global-digital-advertising-update-and-emerging-trends/.

¹⁰¹ Alistair Dent, *Google AdWords Enhanced Campaigns: The Good, Bad & Uncool*, Search Engine Watch, February 6, 2013.

¹⁰² Parker, *supra*.

¹⁰³ Arlene Lee, *YouTube Promoted Videos to Appear on AdSense Sites*, Inside AdSense, October 2, 2009, adsense.blogspot.com/2009/10/youtube-promoted-videos-to-appear-on.html.

1. Market power in the tying product

Google has market power in the tying product market, search advertising. As early as 2008, the US Department of Justice confirmed that search advertising is a relevant antitrust market, and Google's market share in that market exceeds 70%.¹⁰⁴ Google's share of European search advertising spending exceeds 90%.¹⁰⁵

Google argues that it is small relative to advertising markets including television, radio, and print.¹⁰⁶ But multiple authorities have found that search advertising is a relevant market and that Google is dominant in that market.¹⁰⁷

2. A tie

Google imposes a tie. For many of the tied products, including early AdSense placements, early domain parking placements, and recent tablet placements, advertisers were literally unable to obtain standard AdWords placements without accepting (and paying for) unwanted placements.

Elsewhere, Google's tie was *de facto*, grounded in defaults and changes not brought to advertisers' attention. Google would argue that opt-outs blunt any claim of tying. But Google repeatedly failed to tell advertisers about the new service and opt-out via the notification mechanism provided by contract, or such messages were easily overlooked or otherwise deficient.

3. Tying and tied products are distinct

Google would argue that the services at issue are not separate—that AdWords includes whatever Google says it includes. But the “separate demand” test rejects this argument. Other companies previously provided (and to varying extents still provide) advertising placements on independent publishers' sites, in parked domains, and on mobile devices. Advertisers regularly bought those services separately from search advertising, in all combinations. Moreover, some advertisers intentionally avoided certain placements, e.g. because their sites do not display well on small screens or because they objected to placements that they found unethical or risky.

4. Foreclosing competition

By causing advertisers to participate in its new advertising services, Google assures immediate scale for its new advertising services. For services that make payments to publishers (including AdSense and domain parking), scale lets Google assure high payment to publishers from the outset.

¹⁰⁴ *Yahoo! Inc. and Google Inc. Abandon Their Advertising Agreement*, US Department of Justice Press Release, November 5, 2008. See also *Statement of Federal Trade Commission Concerning Google/DoubleClick*, FTC File No. 071-0170, December 20, 2007.

¹⁰⁵ Alex Funk, *Fourth Quarter Global Search Advertising Finished Strong*, Covario Quarterly Global Paid Search Spend Analysis, Q4 2013, covario.com/wp-content/uploads/2014/01/rpt_gpssa_q413_fnl.pdf

¹⁰⁶ Google U.S. Public Policy, *supra*.

¹⁰⁷ See fn.104.

Automatic opt-ins are particularly valuable to Google for coordinating advertisers to accept services they would otherwise decline or accept only with large discounts. Advertisers rightly question new online advertising services with unproven performance, and other vendors face considerable difficulty in overcoming these concerns. In contrast, Google uses its established services to pressure advertisers to accept its new services.

Relatedly, the structure of Google's dealings with advertisers creates an element of coercion. With frequent changes, advertisers struggle to keep up. Furthermore, changes are announced in diverse channels (account screen, email, and Google blogs) without a consolidated notification mechanism or a single option for an advertiser to decline all future changes. Meanwhile, Google shifts competitive dynamics among advertisers by initially compelling participation in new services and by making participation automatic by default. Ordinary entrants must convince each advertiser to accept each new service, including unproven methods with unknown risk. In contrast, by compelling or effectively compelling all advertisers to accept a new service at the outset, Google changes the baseline.

5. Harm to Consumers

These practices cause three primary harms to advertisers. First, advertisers are effectively required to buy additional advertising that they did not request and did not fairly agree to pay for. Second, the additional advertising is more costly than would be the case if Google had to offer discounts to induce advertisers to try it. Third, Google forecloses competition from rivals that provide only the additional forms of advertising. For example, if Google ties mobile ad placements to AdWords, a competing vendor would struggle to sell mobile placements only.

Google might argue that Smart Pricing discounts prevent any harm as a result of ads placed in unwanted locations.¹⁰⁸ But in litigation, Google disavowed any promise to use smart-pricing.¹⁰⁹ Meanwhile, discovery revealed that several large Search Network partners are exempt from Smart Pricing, despite disputed practices.¹¹⁰

6. Lack of countervailing efficiencies

Efficiencies do not outweigh these harms. There is no apparent efficiency in compelling advertisers to accept services they did not request or in imposing procedures whereby advertisers automatically "accept" new placements. Google

¹⁰⁸ Google, *About Smart Pricing*, support.google.com/adwords/answer/2604607.

¹⁰⁹ *Rick Woods v. Google Inc.* N.Dis.Cal. Case No. 5:11-CV-01263-EJD. Motion to Dismiss First Amended Complaint, docket number 73 ("The agreement contains no smart pricing obligation").

¹¹⁰ Frank Schilling, *Pink Houses*, October 15, 2007, domainnamesales.com/sevenmile/2007-10/pink-houses/ ("Ask's feed is not Smart-priced"). Sig Solares, *RE: Is Parked Better than Sedo?*, Domain Name Forum, April 13, 2007, dnforum.com/f366/parked-better-than-sedo-3-thread-221221.html#post1144105 (Parked.com serves Google ads without smart-pricing).

offers dozens of configuration options for online ad campaigns; it would be easy to let advertisers choose which types of advertising they want.

VI. REQUIRING THAT DEVICE MAKERS USE CERTAIN GOOGLE SERVICES IN ORDER TO ACCESS APP STORE AND OTHER GOOGLE SERVICES

Google ties its services in various combinations to strengthen its position in multiple facets of mobile services.¹¹¹

A. Facts and Business Analysis

Google Android is the dominant mobile OS available for installation on third-party hardware.¹¹² In contrast, Apple iOS and RIM Blackberry are only available on those companies' own devices. Windows Phone may be installed on third-party hardware, but has gained little adoption.

Google describes Android as “open,”¹¹³ yet imposes significant restrictions. If a device manufacturer or carrier wants to install any Google services on Android devices, Google requires the preinstallation and default use of numerous other Google services. Furthermore, Google bans certain services from competitors. These tactics advance Google's market position while hindering competitors and would-be competitors.

1. Android as the tying product

Although Android OS is open source, manufacturers need Google's certification and approval to ship a device. For one, certification is required for a device to access Google Play (previously known as Android Market) where users obtain apps. Furthermore, Google can withhold the Android logo and trademark. Google has used these methods to require manufacturers to favor its services.

An initial complaint came from Skyhook, whose software determines a user's geographic location by checking nearby Wi-Fi access points. Motorola and Samsung chose Skyhook's geolocation service over Google Location Services (GLS) to obtain faster and more accurate results and greater privacy. Both companies subsequently dropped Skyhook in favor of GLS.

In a 2010 antitrust complaint, Skyhook alleged that Google required Motorola and Samsung to remove Skyhook from their new devices, on pain of losing compatibility certification. Discovery revealed telling emails among Google executives: “[W]e are using compatibility as club to make [device makers] do

¹¹¹ See generally Thomas H. Au, Note, *Anticompetitive Tying and Bundling Arrangements in the Smartphone Industry*, 16 STAN. TECH. L. REV. 188 (2012).

¹¹² *comScore Reports February 2014 U.S. Smartphone Subscriber Market Share*, comScore, April 4, 2014 (reporting 93.5% Android market share among OSs for installation on third-party hardware).

¹¹³ *Welcome to the Android Open Source Project!*, Android Developers, source.android.com. See also Jonathan Rosenberg, *The Meaning of Open*, Google Public Policy Blog, December 21, 2009, googlepublicpolicy.blogspot.com/2009/12/meaning-of-open.html.

things we want.”¹¹⁴ Google obtained a favorable summary judgment, finding Google’s actions consistent with the governing contract,¹¹⁵ though the court evaluated only principles of contract, interference with business relations, and unfair competition (MGL §93A), but not antitrust or tying.

In parallel, Korean companies NHN (owner of popular Korean search engine Naver) and Daum alleged that Google blocked their search service on Android devices. They noted that Google made its own search service the default, and they said individual users found it “virtually impossible” to switch.¹¹⁶ They noted that every new device required certification by Google, and they said Google delayed the certification of devices that featured their search services.¹¹⁷

2. Google apps as the tying product

In some sectors, Google’s apps have no commercially-viable competitors. Google uses these apps as the basis for tying: To get these apps, a device manufacturer must take the others also.

Most notably, device manufacturers perceive no substitute for YouTube, as its format and content are unmatched by other video libraries. Given YouTube’s importance in demonstrating a smartphone or tablet and data plan, phone manufacturers and carriers find a preloaded YouTube app compulsory.

Google uses the YouTube app and other desirable Google Mobile Services to compel provision of other Google services. To preinstall any Google app, Google requires a device maker or carrier to enter into a Mobile Application Distribution Agreement (MADA). MADA section 2.1 instructs that “Devices may only be distributed if all Google Applications [listed elsewhere] ... are pre-installed.” 3.4(1) requires that the device manufacturer “preload all Google Applications approved in the applicable Territory.” 3.4(2) requires that Google’s apps be prominent, and 3.4(4) requires that Google Search “must be set as the default search provider for all Web search access points”. 3.8(c) requires that Google’s Network Location Provider service be preloaded and default.¹¹⁸

These requirements prevent device manufacturers from offering competitors’ apps. A manufacturer might prefer a competitor’s speed, ease of use, or privacy protections. Alternatively, a manufacturer might find that customers favor a lower price over preinstalled Google apps; preinstalling some competitor’s service could

¹¹⁴ *Skyhook Wireless, Inc. v. Google Inc.*, Affidavit of Douglas R. Tillberg in Support of Skyhook’s Opposition to Google’s Motion to Dismiss or for Summary Judgment (Public Set), MA Civil Action No. 2010-03652-BLS1.

¹¹⁵ *Skyhook Wireless, Inc. v. Google Inc.*, Memorandum of Decision and Order on Defendant Google Inc.’s Motion for Summary Judgment (September 28, 2012), MA Civil Action No. 2010-03652-BLS1.

¹¹⁶ Mark McDonald, *2 Korean Search Engines File a Complaint Against Google*, New York Times, April 15, 2011.

¹¹⁷ Jun Yung, *Google Faces Antitrust Complaints in South Korea on Popularity of Android*, Bloomberg News, April 15, 2011.

¹¹⁸ MADA between Google and HTC Corporation (Revised 12/10). Exhibit 286 in Oracle America v. Google, 3:10-cv-03561-WHA. See also Samsung MADA, Exhibit 2775.

yield a payment to be shared with consumers via a lower retail price for the device. But MADAs disallow such configurations.

In principle, MADAs allows device manufacturers to install third-party apps *in addition* to the listed Google apps. But multiple apps are duplicative, confusing to users, and a drain on limited device resources. Moreover, Google requires that its apps be the default in the key categories of search and location, and Google demands prominent placements. These factors reduce users' attention to other preloaded apps, inhibiting competitors' willingness to pay for preinstallation.

Google's MADA restrictions leave open the possibility of Android devices with no Google apps at all. But without any Google apps, such devices appear not to be commercially viable in major markets. Without the Play app store, users would struggle to get apps from Google or others.¹¹⁹

3. YouTube as the tying product

A Microsoft complaint alleged that Google effectively tied YouTube to Android and iPhone, to the exclusion of Windows Phone and other mobile OSs. Microsoft claimed that Google withheld meta-data necessary for Windows Phone to present YouTube videos with categories, favorites, and ratings.¹²⁰

B. Antitrust Analysis

1. Market power in the tying product

In Google's early dealings with device manufacturers, Android was the tying product. Android was by far the largest mobile OS for installation on third-party hardware.¹²¹ Although Android is open source, Google employed its market power by limiting Play store access and withholding the trademark and logo.

The YouTube app later emerged as a second crucial product. Here too Google possesses market power: YouTube alone presents many popular video clips, and it seems to be impractical to sell a device and data plan to mainstream US or European consumers without high-quality YouTube access. Indeed, YouTube is the fourth-most-popular app (in monthly users),¹²² and the more popular apps all are either available without restriction or have plausible competitors.

2. A tie

Initially, Google implemented a tie by conditioning use of Android (certification, app store access, trademark, and logo) on manufacturers acceding

¹¹⁹ Jerry Hildenbrand, *Beware the Super-Cheap Android Tablets on Black Friday*, Android Central, November 27, 2013.

¹²⁰ Brad Smith, *Adding Our Voice to Concerns about Search in Europe*, Microsoft on the Issues, March 30, 2011, blogs.technet.com/b/microsoft_on_the_issues/archive/2011/03/30/adding-our-voice-to-concerns-about-search-in-europe.aspx (complaint not publicly available).

¹²¹ comScore, April 4, 2014, *supra*.

¹²² Matt Petronzio, *The 10 Most Popular Smartphone Apps in the U.S.*, Mashable, April 3, 2014, mashable.com/2014/04/03/popular-apps-chart/.

to Google's requirements (installing certain Google apps, not installing certain competitor apps, and otherwise configuring devices as Google instructed).

Later, Google developed ties in which certain Google apps (most notably YouTube) served as the tying product, to which other Google apps and services were tied. Specifically, Google conditioned preinstallation of any Google apps on preinstallation of *all* the apps Google specified (with certain configuration and prominence).

Google's restrictions on YouTube access, from other mobile OSs, are also implemented as ties: The tying product is YouTube, and the tied product is Android or, failing that, Apple iOS. Thus, YouTube API restrictions deny full functionality to users who choose Windows Phone.

3. Tying and tied products are distinct

The Android OS is distinct from the Google apps, including separate demand and separate purposes. Users can seek Android and Google apps in any combination: some may want Android with apps from other vendors; others want only certain Google apps. Separation is reinforced by platform design and user interface: Each app has a separate name, installation package, and icon. There is no logical or technical reason why installing one app requires installing the others.

In analogous proceedings against Microsoft, US courts ruled that Windows and Internet Explorer were separate products.¹²³ Similarly, the General Court of the EU found that Windows and Windows Media Player were separate products.¹²⁴

YouTube content is also separate from the choice of mobile OS. YouTube offers content via a platform-independent web service, and the YouTube API facilitates use from diverse devices. No technical barrier requires excluding devices based on OS.

4. Foreclosing competition

Each dispute arises from Google's market power over services without close substitutes (including Android certification, Google Play access, and YouTube). With that power, Google compels distribution of its other services (including geolocation service, mobile search, and maps), even if competitors have viable offerings. In particular, Google uses its market power in the first group to protect and expand in the second—enlarging its dominance and deterring entry.

Tying apps together helps Google whenever a device manufacturer sees no substitute to even *one* of Google's apps. Some manufacturers may be willing to offer devices that default to Bing Search, Duckduckgo, Mapquest, or Yahoo Maps, particularly if paid a fee to do so. (The manufacturer could retain the

¹²³ *United States v Microsoft Corp*, 253 F3d 34, 85 (DC Cir 2001).

¹²⁴ *Microsoft v. Commission*, supra fn.12, at § 933.

payment as profit, or pass the savings to consumers via a lower retail price to increase sales volume.) But only Play lets a manufacturer offer comprehensive apps. Furthermore, a manufacturer would struggle without YouTube preinstalled; such a device would be unattractive to many consumers. Needing Google Play and YouTube, a manufacturer must then accept Google Search, Maps, Network Location Provider, and more—even if the manufacturer prefers a competitor’s offering or prefers a payment for installing some alternative.

Google’s ties suppress competition. The restrictions prohibit alternative vendors from outcompeting Google’s apps on the merits; no matter their advantages, device manufacturers must install Google’s full suite. Furthermore, Google can amend its rules to make its new apps the default in the corresponding categories.¹²⁵ Google’s ties also prevent competitors from paying device manufacturers for distribution: Where such installs are permitted, manufacturers can offer only inferior duplicative placement, not default or exclusive placement.

Google’s tying forecloses competition in multiple mobile services. Skyhook could not distribute its geolocation service in light of Google’s “stop ship” threat. NHN and Daum effectively could not distribute devices with their search services as defaults due to Google’s certification delays. Mobile device manufacturers and carriers cannot substitute competing search or maps services or develop business models grounded in such substitution (for example, via lower-cost devices subsidized through payments from app makers), as this would require foregoing key Google apps. Competing mobile OS Windows Phone cannot offer a full-featured YouTube app without meta-data that Google withholds.

Google claims that device makers were within their rights to terminate their distribution of Skyhook software and that no further scrutiny is required.¹²⁶ Though this argument defeated Skyhook’s claims of intentional interference with contract and unfair competition,¹²⁷ it carries little weight against a tying claim. Specifically, the court offered little consideration of Google’s market power¹²⁸ and no consideration of innovation, entry, or consumer welfare.

As to tying Google Play, YouTube, and YouTube API, Google would argue that it is entitled to structure its offerings as it chooses. Google would dispute its market power in the relevant markets, noting rapid innovation in mobile devices and apps. Google would also deny that consumers are harmed because consumers can change settings and install or uninstall apps. But user customizations only partially discipline Google. For one, only savvy users make such customizations.

¹²⁵ Amir Efrati, “Google’s Confidential Android Contracts Show Rising Requirements,” *The Information*, September 26, 2014.

¹²⁶ *Skyhook Wireless, Inc. v. Google Inc.*, Motion for Summary Judgment, MA Civil Action No. 2010-03652-BLS1.

¹²⁷ *Skyhook*, supra, Memorandum of Decision and Order on Defendant Google Inc.’s Motion for Summary Judgment.

¹²⁸ *Id.*, p.28.

Furthermore, user customizations give competing app developers no way to pay to attract users en masse, as they could by, for example, contracting with device manufacturers or carriers. Nor do user customizations let app developers partially subsidize devices.

Google argues that Android is “open” and “open source”¹²⁹ which, Google suggests, limits concerns about exploiting Android’s popularity. But public access to core Android source code does not impede the Google practices described here.

Google’s tie also blocks competition from alternative mobile ecosystems. For example, Amazon Kindle Fire is an Android customization and is capable of running Google Maps, most or all other Google apps, and most or all apps in the Play app store. But Fire does not comply with MADA restrictions and hence can preinstall none of these. Without Play, users lack an easy way to install Google apps. Instead, a user seeking Google apps must resort to a convoluted manual procedure,¹³⁰ which sharply reduces Kindle Fire’s desirability to users.

By limiting YouTube features on Windows Phone devices, Google specifically weakens that platform—the strongest competitor to Android in the market for OSs to be installed on third-party hardware. Without a full-featured YouTube app, Windows Phone becomes less attractive to consumers and less likely to develop into a robust competitor.

5. Harm to consumers

Google’s ties harm consumers. For one, these restrictions insulate Google from competition. If competing vendors were near, Google would be forced to offer greater benefits to consumers—perhaps fewer ads or greater protections against deceptive apps.

Google accentuates the harm to consumers by imposing restrictions on the Google Play app store. Without Play, a device lacks easy installation of desired Google apps or other apps available only or most easily through Google Play. Instead, obtaining such apps requires rooting a device (risking security vulnerabilities and foregoing future OS updates) or performing manual downloads (numerous additional steps), unrealistic for most users.¹³¹ These impediments cause users to particularly disfavor Android devices that lack Play, reinforcing the restrictions at issue.

Google implements its ties through confidential documents ordinarily withheld from the public. Oracle’s recent suit against Google made HTC and Samsung MADAs available and facilitated public understanding of Google’s tactics.¹³² Previously, even industry experts were uncertain about applicable

¹²⁹ See fn.113.

¹³⁰ David Nield, *How to Get Maps, Gmail on the Kindle Fire HD without Rooting*, CNET, February 15, 2013.

¹³¹ Nield, *supra*.

¹³² See fn.118, *supra*.

rules.¹³³ By keeping its policies confidential, Google suppressed potential backlash from manufacturers, app developers, and consumers.

When questioned about these restrictions, Google directs attention to permitted combinations. For example, in response to Senate questions, Google's Schmidt wrote "Manufacturers can choose to pre-install Google applications on Android devices, ... but they can also choose to pre-install competing search applications like Yahoo! and Microsoft Bing."¹³⁴ Similarly, Google spokesman Kovacevich said it is "just not true" that Android manufacturers must make Google Search the default.¹³⁵ After Korean search portals filed complaints, a Google spokesman claimed "carrier partners are free to decide which applications and services to include on their Android devices."¹³⁶ These statements suggest that device manufacturers and carriers may install Google apps and competing apps in any combination, but in fact the statements provide no such commitment. A careful read reveals the gaps: the statements never disavow the tying described in the preceding sections. Because MADAs were not previously publicly available, critics did not know what precise questions to ask to uncover the restrictions, and Google avoided discussing its actual practices.

A further consumer harm comes from increased device prices. On desktop and laptop computers, manufacturers solicit bids from various search engines seeking to be default. These payments yield an additional revenue source to computer manufacturers, and competition forces manufacturers to pass these savings on to consumers through lower up-front prices. By requiring that mobile device manufacturers make Google search and other apps the default, without payment, Google prevents such bidding in the mobile context, which prevents pass-through price reductions to consumers.

To the extent that Google withholds functionality from competing mobile OSs such as Windows Phone, the harm to consumers is particularly clear-cut: A user with Windows Phone receives inferior functionality (e.g. no YouTube meta-data or robust search). If such consumers then choose Android devices over Windows Phone, Google suppresses OS competition.

6. Lack of countervailing efficiencies

Google's conduct is not outweighed by efficiencies. Whatever the benefits of Google's device certification, alternatives could provide these benefits without harming competition. For example, if Google believes Skyhook returns inaccurate

¹³³ Danny Sullivan, *Google Doesn't Require Google Search On Android, Despite What FairSearch & Microsoft Want You To Believe*, Search Engine Land, September 13, 2012 (consulting public sources to attempt to determine applicable restrictions).

¹³⁴ *Id.*, response to Kohl question 8.a.

¹³⁵ *Searching for Innovation and Competition Online*, FairSearch Conference, September 13, 2012, vimeo.com/49400550.

¹³⁶ Lee, *supra*.

information, Google could tag Skyhook data as such and decline to rely on it. If a device manufacturer wants to change only the default search vendor, Google need not “certify” that exceptionally small adjustment, or such a review could be correspondingly brief.

Meanwhile, Google offers no reason why device manufacturers must not preinstall some Google apps without others. Google’s apps come in separate installation packages with separate code yielding separate icons. Even if some apps rely on shared code libraries, device manufacturers could hide any apps they seek to remove.

One analyst argued that Google’s restrictions help to assure that every device includes basic functionality—noting the risk of devices that lack, e.g., a maps app.¹³⁷ But this concern is equally addressed by requiring a manufacture to install either a Google app or a competing app with similar functionality. This concern does not justify requiring all manufacturers to install Google’s offering.

The same analyst also pointed out that device manufacturers can forego the entire Google suite of apps and services. But this is not commercially viable for mainstream consumers in the US and Europe. Furthermore, if a manufacturer foregoes the entire suite of Google services, users will be unable to access Play to obtain desired apps.

Nor has Google offered any reason why Windows Phone apps should not receive full YouTube access, including the meta-data noted in Microsoft’s complaint. Any such reason would be tenuous since the YouTube API readily offers this information.¹³⁸

VII. IMPLICATIONS

On one view, fast-moving digital markets are ill-suited for decades-old competition frameworks. Certainly some Google’s tactics extend beyond the simple ties examined in historic competition cases. But modern tying doctrine is flexible, considering broad economic impact.

Notably, Google’s tying facilitates expansion to numerous sectors adjacent to Google’s current strongholds. In any sector needing referrals from search, Google can send ample traffic to its own service, gaining scale immediately and with virtual certainty. So too for any service needing advertisers’ participation: Google can enroll its existing advertisers either by requirement or through a strong default, granting the service ample revenue. With less doubt whether a new Google service will take off, Google’s expansion is faster and more likely than

¹³⁷ Daniel O’Connor, *Observations on the Economics of Mobile App Suite Bundling*, Disruptive Competition Project, March 3, 2014, project-disco.org/competition/030314-observations-on-the-economics-of-mobile-app-suite-bundling/.

¹³⁸ *YouTube API*, Google Developers, <https://developers.google.com/youtube/>.

competing on the merits. Using tying to expand into the less-concentrated sectors adjacent to search, Google's dominance grows that much further—with corresponding harms to consumers and advertisers.

Anticipating Google's various expansions, other firms have elected to accede to Google's rules. Some accept acquisitions from Google on less favorable terms than they could have otherwise obtained; others shrink or suffer reduced growth.¹³⁹ Conversely, Google dulls the incentive to enter affected sectors. Leaders of TripAdvisor and Yelp, among others, report that they would not have started their companies had Google engaged in behaviors that later became commonplace.¹⁴⁰

Meanwhile, Google creates an incentive for advertisers, publishers, and users to participate in Google services they dislike. One publisher criticized the “evilness” of Google favoring its own services, but could not pass up the “huge opportunity” (particularly because others would pounce if he declined).¹⁴¹ Thus, usage of Google services may indicate effective duress rather than genuine preference.

Google's tactics show striking similarities to methods previously used by Microsoft. In prior litigation, critics alleged that Microsoft improperly controlled the desktop—what programs were preinstalled and hence easy to access. The same could be said of Google: By adjusting search results, Google shapes what destinations are easy to access. And by imposing rules for what must be preinstalled on mobile devices (and what must not), Google shapes what services are popular. Both Microsoft and Google left consumers broadly able to access additional programs and destinations. Yet that capability, standing alone, does not fully address competition concerns.

Comparing Microsoft's prior practices to Google's current approach reveals three notable differences. First, a user dissatisfied with Microsoft's preinstalled programs could largely fix the problem once, with permanent effect on that computer. For example, a user who preferred another web browser could install it, make it the default, and delete all Internet Explorer icons, which effectively removes the unwanted program. Moreover, a sophisticated user can help a friend do so. In contrast, a user can do nothing to remove links to Google+, Finance, Images, Local, Maps, and other services that appear within Google Search results. Those links are bound to appear when users run future searches at Google, and short of abandoning Google Search altogether, a user cannot avoid them. This is a conscious decision by Google, systematically different from the customization available in modern OSs and indeed in some web services. For example,

¹³⁹ See e.g. *Testimony of Jeremy Stoppelman*, supra (reporting reduced traffic from Google to Yelp); *Foundem's Google Story*, supra (reduced traffic from Google to Foundem).

¹⁴⁰ *Testimony of Jeremy Stoppelman*, supra. Statement of Thomas O. Barnett, supra.

¹⁴¹ Keller, supra.

Facebook lets a user customize a profile with third-party apps.¹⁴² Even Google Personalized Homepage let users install widgets.¹⁴³ Elsewhere, I suggested that users customize Google search results to substitute best-in-class competitors.¹⁴⁴

Second, Google's rules are significantly more intrusive than prior Microsoft requirements. For example, Microsoft required that computer manufacturers distribute Windows intact, without removing Internet Explorer or other components that Microsoft defined as part of Windows.¹⁴⁵ But Google's rules go further, including requiring that Google apps be default, requiring that Google apps be presented in prominent locations, and sometimes prohibiting competitors' apps from being installed.

Third, Google's practices are subject to significantly greater opacity and, indeed, secrecy. A site may suspect that penalties made its links less prominent or its ads more expensive. But sites struggle to prove such allegations; changes might be mere coincidence. Microsoft's practices created no such uncertainty. Meanwhile, many of Google's mobile restrictions are subject to NDA, and Google has been less than forthright in telling the public about its rules. This opacity slows or blocks competitive and regulatory responses. For example, a firm that cannot prove a penalty or retaliation may hesitate to come forward—all the more so since a complaint could prompt further adverse action by Google. Similarly, a consumer who sees that all devices come with Google Maps might (mistakenly) conclude that competing apps are so inferior that all manufacturers voluntarily chose Google.

Google employs tying in multi-sided markets, where platform benefits depend on the number of users, of two or more types, connected to the platform. For example, Google Local relies on users both reading reviews and submitting reviews. This market structure increases the importance of tying. First, Google is able to use tying to bootstrap its offerings—causing users (both consumers and companies) to participate even when the service offers limited benefit. Second, users *anticipate* that Google can invoke such methods to make its service succeed—making it that much more likely that new Google offerings will take hold. Finally, would-be competitors anticipate both the benefits that Google can grant to its own services and the privileges Google can withhold from others. These factors fit the foreclosure analysis long applied under tying doctrine, but carry greater importance in the two-sided markets where Google operates.

Viewing Google's conduct as tying offers further insight on remedies. In Europe, Google proposes search results that show both Google's own services

¹⁴² *Add Things You Care About*, Facebook. facebook.com/help/www/289895441138172.

¹⁴³ Barry Schwartz, *Test The New iGoogle, Google's Personalized Home Page*, Search Engine Land, June 27, 2008.

¹⁴⁴ See fn.65.

¹⁴⁵ *United States v. Microsoft Corp.*, 87 F Supp 2d 30, at 40 (D.D.C. 2000).

and, somewhat less prominently, competitors' offerings.¹⁴⁶ Commentators critiqued this approach for the cost to the companies that buy such placements,¹⁴⁷ limits to which companies are eligible to bid,¹⁴⁸ low prominence of the proposed placements,¹⁴⁹ and other problems not solved by the proposed commitments. From the tying perspective, the natural remedy is to open all ties, allowing competitors to wholly replace Google's offerings (if users so choose) rather than presenting consumers with parallel offerings from both Google and competitors. It appears to be possible to present competitors' offerings on equal footing within Google search results, just as others' browsers can be installed into Windows as true replacements to Internet Explorer.¹⁵⁰

Ultimately, Google's use of tying portends a future of reduced choice, slower innovation, lower quality, and higher prices. To date, Google has focused its harshest terms on advertisers. But advertisers pay Google some \$60+ billion each year, then recoup these expenses through higher prices to consumers.¹⁵¹ Meanwhile, if numerous opportunities are effectively off-limits to competitors because Google either has claimed those sectors or is positioned to be able to claim them whenever it chooses, the incentive to invest is sharply attenuated. These are exactly the practices that competition law seeks to prevent.

¹⁴⁶ *Commission Obtains from Google Comparable Display of Specialised Search Rivals—Frequently Asked Questions*, European Commission Memo 14/87, February 5, 2014.

¹⁴⁷ *ICOMP Response to the European Commission's RFI in Relation to Google's Revised Proposed Commitments*, October 21, 2013, i-comp.org/fr/wp-content/uploads/sites/6/2013/12/ICOMP_rfi.pdf.

¹⁴⁸ *Id.*

¹⁴⁹ David Franklyn and David Hyman, *Review of the Likely Effects of Google's Proposed Commitments dated April 25, 2013*, mimeo.

¹⁵⁰ See fn.65.

¹⁵¹ Benjamin Edelman and Julian Wright, *Price Coherence and Adverse Intermediation*, HBS WORKING PAPER 14-052, December 2013.