

# Concentrated Digital Markets, Restrictive APIs, and the Fight for Internet Interoperability

CHINMAYI SHARMA\*

I. INTRODUCTION .....	442
II. APIS AND AN INTEROPERABLE INTERNET .....	450
A. <i>What is an API?</i> .....	450
B. <i>Interoperability Fosters Competition</i> .....	453
C. <i>Shut Out of the “Walled Gardens”</i> .....	455
III. COMPETITION LAW: A LAY OF THE LAND.....	461
A. <i>The Traditional Antitrust Toolkit</i> .....	462
B. <i>Traditional Antitrust in the “New Economy”</i> .....	463
C. <i>Traditional Antitrust Enforcement</i> .....	467
1. Mergers and Acquisitions .....	468
2. Trade Practices .....	472
IV. SECTION 5 IN THEORY AND PRACTICE.....	477
A. <i>Rulemaking v. Adjudication</i> .....	480
B. <i>Unfair Methods of Competition</i> .....	483
C. <i>Unfair or Deceptive Acts or Practices</i> .....	491

---

\* Chinmayi J. Sharma is a graduate of University of Virginia School of Law class of 2019.

I would like to thank Chris Riley who planted and nurtured the seed that grew into this Article and Professor Thomas Nachbar who never stopped inspiring me to be a better thinker and writer. I would also like to thank Ryan Calo, Sarah Haan, Campbell Haynes, Hutton Marshall, Olivia Vaden, and Michael Weisbuch for their thoughtful candor and encouragement. I would also like to thank the editorial board of *The University of Memphis Law Review*, especially Carson Reeves Gilbert, for taking a patient and diligent red pen to my work and for this immense opportunity to contribute to the study of law. And to my parents, who believed the best in me long before I believed it in myself.

All views herein are my own.

D. Privacy Cases—Where Competition Meets Consumer Harm.....	499
E. Proactive Remedies .....	503
V. CONCLUSION.....	506

*The Internet consists of disparate websites that, though built independently by separate developers, must interact with each other to provide a seamless user experience. Application Programming Interfaces (APIs), which enable these interactions, were originally built out of necessity but expanded in functionality as businesses matured. Some of the most familiar names on the Internet—Facebook, Amazon, Google—have long made APIs available to allow smaller players the chance to gain a foothold in a data marketplace controlled by a concentrated few. In turn, these platforms rose to prominence as the downstream success of these third parties using APIs generated upstream value for the provider via user traffic or valuable data. Increasingly, however, dominant platforms have begun closing off access to information and features by restricting APIs.*

*This Article shows APIs are critical to Internet interoperability, which in turn fosters a truly competitive online marketplace. Conversely, overly restrictive APIs can amount to violations of competition law. However, this Article argues that while traditional antitrust is ill-suited to redress these harms, the Federal Trade Commission’s Section 5 authorities are sufficiently flexible to fill the void. Given the political push to check “big tech” and the rise of Section 5 activity in data privacy, now is the time for the FTC to begin using this authority to monitor detrimental API designs.*

## I. INTRODUCTION

On January 25, 2019, in a decision directly impacting 2.6 billion people, Facebook announced that it would be integrating Facebook

Messenger, WhatsApp, and Instagram.<sup>1</sup> This is not a formal merger of business entities but a technical merger of its three major communication platforms, keeping the front-end applications separate while allowing users to communicate across them.<sup>2</sup> To accomplish this, Facebook plans to rebuild its internal technical infrastructure by 2020 so that the three platforms operate on a unified foundation.<sup>3</sup> That is, after years of being unable to speak the same language, these rival siblings will converse in a newly formed common dialect. Most users already regularly exercise the ability to post their newest Instagram post to their Facebook Newsfeed automatically. The full integration will allow users to communicate with each other across platforms, sending encrypted messages from Instagram to Facebook Messenger or WhatsApp without leaving the app.<sup>4</sup> However, it will also reduce broader Internet interoperability, decreasing the ability for third-party apps to interact with one of these three platforms. Ironically, Facebook's internal integration has also been coined project "interoperability."<sup>5</sup>

Some suggest Facebook's development of an integrated technical platform for its three communication services is a strategic play in response to threats of competition enforcement action.<sup>6</sup> The future costs of breaking up the business will rise exorbitantly, discouraging that particular remedial measure.<sup>7</sup> Facebook's fear of regulation is

---

1. See Mike Isaac, *Zuckerberg Plans to Integrate WhatsApp, Instagram and Facebook Messenger*, N.Y. TIMES (Jan. 25, 2019), <https://www.nytimes.com/2019/01/25/technology/facebook-instagram-whatsapp-messenger.html?module=inline>.

2. *Id.*

3. *Id.*

4. Russell Brandom, *The Messy Details Behind Facebook's Messaging Plans*, THE VERGE (Mar. 7, 2019, 12:21 PM), <https://www.theverge.com/2019/3/7/18254715/facebook-instagram-whatsapp-messaging-plan-single-encrypted-ephemeral-news-feed>.

5. Mike Isaac, *How Facebook Is Changing to Deal with Scrutiny of Its Power*, N.Y. TIMES (Aug. 12, 2019), <https://www.nytimes.com/2019/08/12/technology/facebook-antitrust.html>.

6. See *id.*; see also Sally Hubbard, *How to Stop Facebook's Dangerous App Integration Ploy*, Opinion, N.Y. TIMES (Feb. 5, 2019), <https://www.nytimes.com/2019/02/05/opinion/facebook-integration.html>.

7. See Isaac, *supra* note 5.

more than paranoia.<sup>8</sup> Indeed, their announcement came amidst a wave of congressional oversight hearings and a flurry of competition and privacy law enforcement actions in the European Union (“EU”).<sup>9</sup> In addition to the FTC,<sup>10</sup> the Department of Justice (“DOJ”)<sup>11</sup> and a coalition of state attorney generals<sup>12</sup> are all investigating tech companies for anticompetitive practices. Several of its competitors<sup>13</sup> and some internal employees<sup>14</sup> have voluntarily cooperated with investigators, providing meticulously compiled dossiers outlining Facebook’s predatory and anticompetitive acquisition strategies. These testimonies recount a scenario in which Facebook can pick winners by acquiring them and quash losers by denying them access to their developer platform.<sup>15</sup> Most of these ongoing investigations are exploring the exertion of unilateral power by a dominant platform over smaller, dependent platforms. The common denominator is the concern for true Internet interoperability.

---

8. See Isaac, *supra* note 5; see also Richard Blumenthal & Tim Wu, Opinion, *What the Microsoft Antitrust Case Taught Us*, N.Y. TIMES (May 18, 2018), <https://www.nytimes.com/2018/05/18/opinion/microsoft-antitrust-case.html>.

9. See generally Laura Kayali, *Inside Facebook’s Fight Against European Regulation*, POLITICO (Apr. 4, 2019, 1:21 AM), <https://www.politico.eu/article/inside-story-facebook-fight-against-european-regulation/>; John D. McKinnon & Deepa Seetharaman, *In Facebook Hearings, Lawmakers Ramp Up Talk of Regulation*, WALL ST. J. (Apr. 11, 2018, 8:09 PM), <https://www.wsj.com/articles/congressional-hearing-on-facebook-turns-up-heat-on-mark-zuckerberg-1523464332>.

10. See Isaac, *supra* note 5.

11. See Diane Bartz, *U.S. Justice Department to Open Facebook Antitrust Investigation: Source*, REUTERS, Sept. 25, 2019, <https://www.reuters.com/article/us-facebook-probe-antitrust/justice-department-to-open-facebook-antitrust-investigation-source-idUSKBN1WA35M>.

12. John D. McKinnon & Brent Kendall, *States to Move Forward with Antitrust Probe of Big Tech Firms*, WALL ST. J. (Aug. 19, 2019, 9:56 PM), [https://www.wsj.com/articles/attorneys-general-to-move-forward-with-antitrust-probe-of-big-tech-11566247753?mod=hp\\_lead\\_pos1](https://www.wsj.com/articles/attorneys-general-to-move-forward-with-antitrust-probe-of-big-tech-11566247753?mod=hp_lead_pos1).

13. Alison Durkee, *Snap Snitches on Facebook to the FTC with “Project Voldemort” Dossier*, VANITY FAIR (Sept. 24, 2019), <https://www.vanityfair.com/news/2019/09/facebook-snap-ftc-antitrust>.

14. Salvador Rodriguez, *As Calls Grow to Split Up Facebook, Employees Who Were There for the Instagram Acquisition Explain Why the Deal Happened*, CNBC (Sept. 24, 2019, 1:58 PM), <https://www.cnbc.com/2019/09/24/facebook-bought-instagram-because-it-was-scared-of-twitter-and-google.html>.

15. See Durkee, *supra* note 13.

Interoperability refers to the ability for disparate things to function together. Specifically, in the context of the Internet, interoperability refers to the ability of two programs or pieces of software to exchange and make use of each other's information.<sup>16</sup> These transactions require a common digital parlance, or a shared vocabulary, and a predetermined communication format, or agreed upon conversation syntax. Application Programming Interfaces ("APIs") provide both<sup>17</sup> through protocols designed to allow third parties access to information in the developer's possession and contingent on the requesting party accepting certain conditions.<sup>18</sup> For example, when someone uses Google to find restaurants nearby, the computer needs to send information to Google in a language Google can understand and a format Google is prepared to receive: first latitude, then longitude, then radius for the search. In turn, Google will send back information in a language the computer can understand in a format the computer is expecting: a list of responses, each including the latitude and longitude for a restaurant, the restaurant's name, the restaurant's rating, etc. If the computer instead expected longitude before latitude, the locations on the map would be totally inaccurate.

Companies build APIs not only to benefit their own end-users but also to reap the benefits of downstream third-party innovation. Third parties can build off existing information and capabilities made available through APIs to create new innovative platforms, such as the

---

16. *Interoperability*, TECHOPEDIA, <https://www.techopedia.com/definition/631/interoperability> (last visited Oct. 29, 2019).

17. See *What is an API? (Application Programming Interface)*, MULESOFT, <https://www.mulesoft.com/resources/api/what-is-an-api/> (last visited Oct. 29, 2019). APIs are not only limited to the Internet. They can be used in software, in cars, or on desktops, but this piece will focus on their use on the Internet.

18. For example, Twitter conditions the use of its API on stringent terms and conditions, including rate restrictions. See Yoel Roth & Rob Johnson, *New Developer Requirements to Protect Our Platform*, TWITTER: DEVELOPER BLOG (July 24, 2018), [https://blog.twitter.com/developer/en\\_us/topics/tools/2018/new-developer-requirements-to-protect-our-platform.html](https://blog.twitter.com/developer/en_us/topics/tools/2018/new-developer-requirements-to-protect-our-platform.html).

GIPHY<sup>19</sup> and Bitmoji<sup>20</sup> add-ons to various messaging applications. Companies are encouraged to build APIs because downstream applications built using their APIs can drive web traffic to the primary provider or provide them with valuable user data. For example, in 2018, Apple announced its own version of Bitmoji, Memoji,<sup>21</sup> likely using the user data it accumulated from the third-party developer to refine its own competing version before launching. This symbiotic relationship fosters the streamlined, collaborative Internet experience to which we have grown accustomed. For example, many of us use our Facebook or Google accounts to log into a large number of unrelated platforms, a convenience made possible through APIs. A diverse online marketplace with comparably situated developers will result in mutually beneficial APIs that strike a balance between retaining information that serves as a competitive advantage and sharing information with third parties that could benefit the company in other ways.

The Internet's currency is data, and time has seen a few names emerge as the most powerful data brokers in our world today.<sup>22</sup> As

---

19. *The GIPHY for iMessage Extension is Here!*, GIPHY, <https://giphy.com/posts/the-giphy-for-imessage-extension-is-here> (describing the new ability to access the GIPHY GIF library without leaving the iPhone's iMessage application, made possible by APIs) (last visited Oct. 29, 2019).

20. *Your Personal Emoji*, BITMOJI, <https://www.bitmoji.com/> (presenting a personalized avatar intended to represent the user posing in a library of images for all occasions) (last visited Oct. 29, 2019).

21. See Sarah Emerson, *Apple's Memoji Is Copying Bitmoji and Snapchat*, VICE (June 4, 2018, 2:13 PM), [https://www.vice.com/en\\_us/article/43549p/apples-memoji-is-copying-bitmoji-and-snapchat-wwdc](https://www.vice.com/en_us/article/43549p/apples-memoji-is-copying-bitmoji-and-snapchat-wwdc).

22. See Michelle Evans, *Why Data Is the Most Important Currency Used in Commerce Today*, FORBES (Mar. 12, 2018, 7:04 AM), <https://www.forbes.com/sites/michelleevans/2018/03/12/why-data-is-the-most-important-currency-used-in-commerce-today/#59a6e5bc54eb>; Farhad Manjoo, *How the Frightful Five Put Start-Ups in a Lose-Lose Situation*, N.Y. TIMES (Oct. 18, 2017), <https://www.nytimes.com/2017/10/18/technology/frightful-five-start-ups.html>; Farhad Manjoo, *Tech Giants Seem Invincible. That Worries Lawmakers.*, N.Y. TIMES (Jan. 4, 2017), <https://www.nytimes.com/2017/01/04/technology/techs-next-battle-the-frightful-five-vs-lawmakers.html>; see also Thomas O. Barnett, Assistant Attorney Gen., Dep't. of Justice, Antitrust Div., *Interoperability Between Antitrust and Intellectual Property*, Presentation to George Mason University School of Law Symposium: Managing Antitrust Issues in a Global Marketplace (Sept. 13, 2006), in 14 Geo. Mason L. Rev. 859 (2007) (discussing the potential issues of applying the idea of

companies grow in size, hitting a critical mass in user base, the upstream benefits of maintaining open APIs diminish and so do the incentives to allow third parties to benefit from APIs. Some fear that due to this coalescence of power, APIs, the “connective tissue” of the Internet, are becoming increasingly restrictive, reducing Internet interoperability and the benefits that come with it.<sup>23</sup> Others contend that these companies have earned their rapid ascent to the top of the data chain by winning the hearts of the public and so should reap the benefits of their efforts.<sup>24</sup>

Reducing interoperability prevents new players from accessing old features and information, strangling innovation by favoring those pre-existing players lucky enough to have rode the bubble. It is not, proverbially, asking someone to reinvent the wheel but rather asking someone to recreate the tools required to invent the wheel. The feared outcome is losing the ability to pick different providers for Internet services—mail, social media, shopping, weather—and having a few dominant players provide *all* the services. Market concentration in an inevitably digital world makes all users beholden to the whims and contingencies of big tech.

Fears of digital Armageddon may seem sensationalist, but the shift in power from the hands of many to the hands of a few is a familiar narrative, one with which the law is well acquainted.<sup>25</sup> The doomsday

---

market “dominance” to companies who gain market power via intellectual property); JONATHAN L. ZITTRAIN, *THE FUTURE OF THE INTERNET—AND HOW TO STOP IT* 81–82 (2008).

23. Chris Riley, Mozilla Corporation, Comment Letter on Competition and Consumer Protection in the 21st Century Hearings, Project Number P181201, at 2–3 (Aug. 20, 2018), [https://www.ftc.gov/system/files/documents/public\\_comments/2018/08/ftc-2018-0050-d-0021-155045.pdf](https://www.ftc.gov/system/files/documents/public_comments/2018/08/ftc-2018-0050-d-0021-155045.pdf).

24. See Rick Newman, *We Need More Monopolies Like Google*, YAHOO! FINANCE (Sept. 9, 2019), [https://finance.yahoo.com/news/we-need-more-monopolies-like-google-202447665.html?guccounter=1&guce\\_referrer=aHR0cHM6Ly93d3cuZ29vZ2x1LmNvbS8&guce\\_referrer\\_sig=AQAAANJGvb-ByG0\\_7j95AxQzCpEHqSQj746NMXR5L6786P6N7HM4W-6J66YC4myHbjMlxqUwb9vLHfp0P3fHKbUPvg3gayPJ0q9ye077SW3YEvdkpgQ-WIEvMbusPAWUYIhc1AfcyCqhvvAXRfJnLNH8Coj8L0jv21AFPsFsS1rZYLM8k](https://finance.yahoo.com/news/we-need-more-monopolies-like-google-202447665.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2x1LmNvbS8&guce_referrer_sig=AQAAANJGvb-ByG0_7j95AxQzCpEHqSQj746NMXR5L6786P6N7HM4W-6J66YC4myHbjMlxqUwb9vLHfp0P3fHKbUPvg3gayPJ0q9ye077SW3YEvdkpgQ-WIEvMbusPAWUYIhc1AfcyCqhvvAXRfJnLNH8Coj8L0jv21AFPsFsS1rZYLM8k) (discussing consumers’ love for Google versus regulators’ and politicians’ problems with the company).

25. See generally ZITTRAIN, *supra* note 22 (analyzing the origins of the Internet, the shift away from openness principles in the Internet, and how the law might be able to help recapture some of those founding principles).

scenario of a fully monopolized Internet need not come to pass for the law to care about trends in that direction. In theory, competition law is equipped to address both (1) unjustified competition harms and (2) unreasonable consumer harms. Therefore, if the trend towards increasingly restrictive APIs poses a threat to software innovation and the public at large, competition law should be able to mitigate our concerns and neutralize the threats.

The regulation of restrictive APIs does not require unprecedented FTC overreach—in fact, the FTC has expressed a willingness to take on big tech. The FTC has already initiated a formal antitrust investigation of Facebook on the heels of imposing an unprecedented large fine on the company for violating an FTC consent decree.<sup>26</sup> Additionally, for the first time since the 1995 Pitofsky hearings, the FTC convened a series of hearings in the fall of 2018 in part to explore new strategies to address the fundamentally unique challenges presented by networked technologies and online marketplaces.<sup>27</sup> This would not mark the first instance of the agency exercising its authorities in new arenas. The past decade has seen a rise in the number of data breach cases brought by the FTC retrofitting competition law to address privacy harms.<sup>28</sup> FTC enforcement through Section 5, potentially starting

---

26. Brent Kendall et al., *FTC Antitrust Probe of Facebook Scrutinizes Its Acquisitions*, WALL ST. J. (Aug. 1, 2019, 6:17 PM), <https://www.wsj.com/articles/ftc-antitrust-probe-of-facebook-scrutinizes-its-acquisitions-11564683965>.

27. See Fed. Trade Comm'n, *Announcement of Hearings on Competition and Consumer Protection in the 21st Century*, [https://www.ftc.gov/system/files/attachments/hearings-competition-consumer-protection-21st-century/hearings-announcement\\_0\\_0.pdf](https://www.ftc.gov/system/files/attachments/hearings-competition-consumer-protection-21st-century/hearings-announcement_0_0.pdf) (last visited Oct. 30, 2019); see also Fed. Trade Comm'n, *Comment of Federal Trade Commissioner Rohit Chopra, Hearing #1 on Competition and Consumer Protection in the 21st Century*, No. FTC-2018-0074, at 2–3 (Sept. 6, 2018) [hereinafter *Comment of Federal Trade Commissioner Rohit Chopra*], [https://www.ftc.gov/system/files/documents/public\\_statements/1408196/chopra\\_-\\_comment\\_to\\_hearing\\_1\\_9-6-18.pdf](https://www.ftc.gov/system/files/documents/public_statements/1408196/chopra_-_comment_to_hearing_1_9-6-18.pdf) (discussing how the status quo of FTC enforcement suffers from ambiguity and is inefficient). Commissioner Chopra has suggested that the FTC may be revitalizing its role in setting and effectuating competition policy again, using its “full set of tools and authorities—not only those that [it has] traditionally relied upon.” *Id.* at 1.

28. See generally FED. TRADE COMM'N, *PRIVACY & DATA SECURITY UPDATE: 2017* (2018), [https://www.ftc.gov/system/files/documents/reports/privacy-data-security-update-2017-overview-commissions-enforcement-policy-initiatives-consumer/privacy\\_and\\_data\\_security\\_update\\_2017.pdf](https://www.ftc.gov/system/files/documents/reports/privacy-data-security-update-2017-overview-commissions-enforcement-policy-initiatives-consumer/privacy_and_data_security_update_2017.pdf) (recapping recent litigation by the FTC in the realm of data privacy protection).



with Facebook, could help shape acceptable standards for API design and expectations for online interoperability much in the same way that data security enforcement actions have proffered de facto cybersecurity standards for companies.<sup>29</sup>

The Internet's honeymoon phase, if there ever were one, is coming to an end. In its wake, we are left to answer questions about the expectations we can and should have from the digital network that connects individuals and communities globally.<sup>30</sup> To be clear, the question is not whether we want these technologies—that answer is a resounding “yes”—but rather, what are our demands of the companies at the helm of this digital revolution.

The stakes are high because, while code is easier to recall than physical products, structural changes to the makeup of the Internet by redesigning its “connective tissue,”<sup>31</sup> APIs, have far reaching effects that we cannot anticipate. The Internet is like an organic content generation machine, constantly expanding. Far from nascent, many consider the Internet too far gone to be “unmade” or even substantially altered. Therefore, the decisions we make now will ossify principles and norms into Internet design and behavior with inertia that would be hard to reverse. This Article will focus specifically on the question of whether, when, and how Internet interoperability should be regulated.

Part II of this Article reviews the evidence that restrictive APIs are injurious to Internet interoperability, which in turn harms competition and consumer welfare. Part III explains that while doctrinal and structural barriers debilitate the efficacy of the traditional antitrust toolkit, Section 5's flexibility can more aptly address restrictive API trends. Ultimately, Part IV argues for the more active use of Section 5 authorities to regulate APIs as either “unfair methods of competition” or “unfair and deceptive acts of practices.”

---

29. See Daniel J. Solove & Woodrow Hartzog, *The FTC and the New Common Law of Privacy*, 114 COLUM. L. REV. 583, 676 (2014) (“[T]he FTC has created a body of common law doctrines . . .”).

30. See Alexis C. Madrigal, *When the Tech Mythology Collapses*, THE ATLANTIC (Nov. 15, 2018), <https://www.theatlantic.com/technology/archive/2018/11/facebook-google-amazon-and-collapse-tech-mythology/575989/>.

31. Keerthi Iyengar et al., *What it Really Takes to Capture the Value of APIs*, MCKINSEY DIGITAL (Sept. 2017), <https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/what-it-really-takes-to-capture-the-value-of-apis>.

## II. APIs AND AN INTEROPERABLE INTERNET

Understanding how APIs operate can elucidate how they contribute to interoperability and why interoperability is important for a healthy online marketplace. APIs are neither the secret sauce that originally led to an online platform's rise to prominence, nor are APIs the bread and butter that drives a platform's continued success. Rather, they act as gatekeepers to the information bank account fueling all business activity, limiting access through their lock and key design. And as with banks, they allow the owner to benefit from opening access to this stockpile to others who would pay to use it. They represent a two-way dataflow: opening access to third parties to internal data and features, while receiving valuable user information from those third parties about their user activity. Essentially, the code reflects and fosters an organic, symbiotic relationship.

### *A. What is an API?*

Over 1.5 billion websites are registered on the Internet,<sup>32</sup> and all of them interact with each other to some degree to provide their unique services. For example, for a single web search, an Internet browser needs to access Bing. Bing then links to the websites in the search results, and these websites often rely on CAPTCHA to verify that the person conducting the search is not a robot. Each task is accomplished by a different entity, but each entity relies on information provided by the others—information communicated through APIs. The Internet has been called an information highway, a digital infrastructure, or even a set of pipes. But ultimately, it is nothing more than a series of protocols designed to foster the creation and transfer of information, or data, as described above.

These protocols comprise the fabric of the Internet. They enable programming languages to build applications, enable data transfers necessary to connect with other Internet users, and enable shared access to public or proprietary tools to carve out new digital spaces.<sup>33</sup> Previously, these protocols were born of necessity and expanded to achieve

---

32. *Total Number of Websites*, INTERNET LIVE STATS, <http://www.internetlivestats.com/total-number-of-websites/> (last visited Oct. 30, 2019).

33. *See The Internet of APIs*, DEVOPS (Feb. 9, 2015), <https://devops.com/internet-apis/>.

greater efficiency and innovation among developers collaborating to realize the dream of a powerful open Internet.<sup>34</sup> But, as with all good inventions, the Internet was quickly conquered by commercial entities that then used and created new protocols to further their business ends.<sup>35</sup> The collection of these protocols that broker interactions with a particular entity on the Internet are referred to as Application Programming Interfaces (APIs), or libraries of protocol layers.<sup>36</sup>

APIs are the connective tissue that allow the various platforms in our digital economy to request and send information to each other.<sup>37</sup> Individuals utilize APIs when using their computers to interact with other computers by sending their information, in the form of an API call, to receive external information. For this to work, networked computers must be ubiquitously accessible and process the individual's request, or API call, in standard protocol to ensure communication.<sup>38</sup> To ensure that their APIs are openly accessible, companies publish documentation outlining how their API is designed, what kind of information third parties can access, the manner in which they have to make the call to receive a reply, and the terms of use for the API.<sup>39</sup>

---

34. See Kleinrock, *Fifty Years of the Internet: What We Learned, and Where Will We Go Next?*, TECHCRUNCH (Mar. 18, 2019, 6:30 AM), <https://techcrunch.com/2019/03/18/fifty-years-of-the-internet/>.

35. See *API 101*, API EVANGELIST, <http://101.apievangelist.com/> (last visited Oct. 30, 2019) (“The average website gets its content from a variety of API driven resources, both from public and private sources, making the aggregation of content a viable business model in 2014.”).

36. Vangie Beal, *API—Application Program Interface*, WEBOPEDIA, <https://www.webopedia.com/TERM/A/API.html> (last visited Oct. 30, 2019).

37. Tyler Elliot Bettilyon, *What Is an API and Why Should I Use One?*, MEDIUM (Jan. 11, 2018), <https://medium.com/@TebbaVonMathenstien/what-is-an-api-and-why-should-i-use-one-863c3365726b>.

38. See *Web API Design*, MICROSOFT AZURE (Jan. 11, 2018), <https://docs.microsoft.com/en-us/azure/architecture/best-practices/api-design> (“Platform independence. Any client should be able to call the API, regardless of how the API is implemented internally. This requires using standard protocols, and having a mechanism whereby the client and the web service can agree on the format of the data to exchange.” (emphasis omitted)).

39. See, e.g., *Microsoft API and Reference Catalog*, MICROSOFT DEVELOPER NETWORK, <https://msdn.microsoft.com/en-us/library/> (last visited Oct. 30, 2019); *Google APIs Explorer*, GOOGLE, <https://developers.google.com/apis-explorer/> (last visited Oct. 30, 2019). Sadly, this documentation “is notoriously neglected and often

In short, standardization feeds interoperability—a feature that is not anomalous to the digital sphere. In fact, the vast majority of consumer products are aggregations of disparate patented technologies packaged together. They function because they have been built according to standards formally set by competitors in contracts.<sup>40</sup> For example, the manufacture of a single laptop can necessitate adherence to between 250–500 interoperability standards.<sup>41</sup> But, while a laptop is a discrete product with finite parties to invite to a standard-setting negotiation, the number of potential parties interacting with any given website can be near infinite. For example, Yelp as a platform needs to interact with Google and Apple Maps to provide directions, OpenTable and Resy to facilitate making a reservation, a phone’s GPS to determine proximity, a phone’s keyboard to allow users to post reviews, and thousands of advertising providers that pay to post commercials. With the multitude of players involved in any given digital interaction, formal standard-setting procedures common for market players like Dell and Apple are impractical for the digital market.<sup>42</sup> Instead, websites like Yelp, Google, Apple, and the other aforementioned entities publish their APIs.<sup>43</sup>

---

out of date or incomplete, meaning the specifications that set forth purportedly permissible interactions may be incorrect, while other technically possible interactions could be undocumented.” Suzanne Van Arsdale & Cody Venzke, *Predatory Innovation in Software Markets*, 29 HARV. J.L. & TECH. 243, 263 (2015) (citing IAN SOMMERVILLE, *SOFTWARE ENGINEERING* 64 (Addison-Wesley, 9th ed. 2011)). Documentation is often low priority, so emergency fixes may be made and forgotten, leaving documentation and code unaligned. SOMMERVILLE, *supra*, at 239.

40. See Christopher Hardee, *Single-Firm Opportunism and the FTC’s Rambus Defeat: Implications for Section 2 of the Sherman Act*, 18 TEX. INTELL. PROP. L.J. 97, 98–99 (2009).

41. Brad Biddle et al., *How Many Standards in a Laptop? (And Other Empirical Questions)*, in PROCEEDINGS OF THE 2010 ITU-T KALEIDOSCOPE: BEYOND THE INTERNET?—INNOVATION FOR NETWORKS AND SERVICES 123, 125 (2010), [https://www.itu.int/dms\\_pub/itu-t/opb/proc/T-PROC-KALEI-2010-PDF-E.pdf](https://www.itu.int/dms_pub/itu-t/opb/proc/T-PROC-KALEI-2010-PDF-E.pdf).

42. See Arsdale & Venzke, *supra* note 39, at 251–53.

43. Cf. *Web API Design*, *supra* note 38.

### B. Interoperability Fosters Competition

The symbiotic relationships fostered by APIs enhances competition in the digital marketplace. Interoperability can have three types of effects on competitive markets:

- (1) [D]irect, in which increased use increases the value of the product itself;
- (2) indirect, in which increased use leads to development of complementary products, such as applications for a specific platform, which in turn increases the value of the product; and
- (3) two-sided, in which increased use by one set of users increases the value of a complementary product and vice-versa.<sup>44</sup>

Economists widely recognize the formidable hurdle of entering online markets as a feat that “requires either building up strong brand recognition to draw users to an independent site,” a resource intensive route, “or using an existing platform,”<sup>45</sup> an option made possible by permissive APIs. Innovative products and new startups built off existing platforms use permissive APIs to gain a foothold in a tumultuous market. In turn, the original platforms increase in value and experience an influx of new users. As the saying goes, “rising tides raise all ships.”

Interoperability also lowers the barrier of entry to the online marketplace by encouraging the development of complementary platforms.<sup>46</sup> At the early stages of the Internet, online platforms were united in their pursuit for active, loyal user bases and collaborated with

---

44. Arsdale & Venzke, *supra* note 39, at 270 (first citing Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424 (1985); then citing Nicholas Economides & Steven C. Salop, *Competition and Integration Among Complements, and Network Market Structure*, 40 J. INDUS. ECON. 105 (1992); and then citing Geoffrey G. Parker & Marshall W. Van Alstyne, *Two-Sided Network Effects: A Theory of Information Product Design*, 51 MGMT. SCI. 1494 (2005)).

45. Lina M. Khan, *Amazon’s Antitrust Paradox*, 126 YALE L.J. 710, 774 (2017).

46. See James B. Speta, *Tying, Essential Facilities, and Network Externalities: A Comment on Piraino*, 93 NW. U. L. REV. 1277, 1280–81 (1999) (“[M]onopoly owners of a network good may have additional incentives not to preclude competitive offerings of complementary goods, especially in early phases of the development of the network, because consumers value bigger networks more highly.”).

each other to accomplish these goals.<sup>47</sup> APIs helped broker these cooperative, pro-competitive strategies. For example, Instagram has witnessed the advent of Instagram celebrities, or individuals who appear to have accumulated overnight fandom teaching people to “be yourself.”<sup>48</sup> In reality, they are the success stories of third-party apps that allow for planned posts,<sup>49</sup> follower analytics,<sup>50</sup> and trend-worthy Boomerangs.<sup>51</sup> These third-party apps rely on Instagram’s API to pull information about users and push information such as curated content. Instagram and these third-party apps mutually benefit from the traffic generated. Security apps have also flourished because platforms like Instagram are reliant on them,<sup>52</sup> recognizing platforms sink when users feel unsafe.

The pro-competitive benefits of this “rising tides raise all ships” approach to API design extend beyond encouraging the development of complementary products. Platforms with more universally beneficial services or information can offer access to their APIs for a fee.<sup>53</sup>

---

47. See Kleinrock, *supra* note 34.

48. See Mark Hill, *6 Stories that Prove Instagram Influencers are the Worst*, CRACKED (Mar. 15, 2019), [https://www.cracked.com/article\\_26246\\_6-stories-that-prove-instagram-influencers-are-worst.html](https://www.cracked.com/article_26246_6-stories-that-prove-instagram-influencers-are-worst.html).

49. See Christy Laurence, *Third Party Apps Can Now Post Directly to Instagram*, PLANN (Feb. 10, 2018), <https://www.planthat.com/instagram-now-lets-third-party-apps-post-directly/>.

50. See *What Are the Best Apps to Get Followers on Instagram?*, BINGE.CO, <https://binge.co/what-are-the-best-apps-to-get-followers-on-instagram> (last visited Oct. 31, 2019).

51. See Chris Perkins, *Instagram Launches Boomerang, an App for 1-Second Videos*, MASHABLE (Oct. 22, 2015, 11:43 AM), <https://mashable.com/2015/10/22/instagram-boomerang/#hf4v6oKYpuqB>.

52. *Instagram Enables Third-Party Authentication Apps to Complete 2FA*, SOCIAL SAMOSA (Oct. 10, 2018), <https://www.socialsamosa.com/2018/10/instagram-third-party-authentication-2fa/> (highlighting how Instagram uses two-factor authentication to authenticate users while logging into the platform).

53. For example, Google allows platforms to use Google Maps for a fee. *Pricing for Maps, Routes, and Places*, GOOGLE CLOUD, <https://cloud.google.com/maps-platform/pricing/sheet/> (last visited Dec. 29, 2019). Permissive APIs refer to APIs that permit open access to a large amount of information without prohibitive conditions. See Margaret Rouse, *Open API (Public API)*, SEARCHAPP ARCHITECTURE, <https://searchapparchitecture.techtarget.com/definition/open-API-public-API> (last updated Sept. 2019). So, the access need not be free

This type of open access to platforms allows for more options to flood the market, theoretically driving out poor quality options that are unable to generate sufficient value to bear the cost of using the API. For example, Google provides its Maps product to developers at a price based on use.<sup>54</sup> This allows developers to put Google Maps on their websites and enables users to get directions to a location directly from their app without going to Google.<sup>55</sup> The developer pays for this use at a cost proportional to the traffic his or her third-party product generates.<sup>56</sup> This has created an economy of map-based applications that detect potholes, warn of anomalous traffic, and suggest new restaurants, without the new companies having to recreate Google Maps from the ground up.<sup>57</sup>

### C. Shut Out of the “Walled Gardens”

The concentration of the Internet marketplace in the hands of a few players removes incentives to maintain interoperability, making the issue unlikely to self-correct. As online companies mature, the marginal utility of additional exposure via third-party applications becomes outweighed by the potential benefits of restricting open access to proprietary information to *stifle future competition*.<sup>58</sup> Thus, dominant

---

but rather ubiquitously available for a reasonable cost. A revenue model would allow the platform to let market demand for its information and services to determine the price of access, maintaining competition principles.

54. *Google Maps Platform Terms of Service*, GOOGLE CLOUD, [https://cloud.google.com/maps-platform/terms/?\\_ga=2.109182405.1311130445.1574117980-479475063.1572475068#3-license](https://cloud.google.com/maps-platform/terms/?_ga=2.109182405.1311130445.1574117980-479475063.1572475068#3-license) (last modified Nov. 21, 2019).

55. *Google Maps Platform Service Specific Terms*, GOOGLE CLOUD, <https://cloud.google.com/maps-platform/terms/maps-service-terms> (last modified Oct. 15, 2018).

56. See *Pricing for Maps, Routes, and Places*, *supra* note 53.

57. Cf. Nathan Francis, *Collection of the Coolest Uses of the Google Maps API*, JOTFORM: BLOG, <https://www.jotform.com/blog/collection-of-the-coolest-uses-of-the-google-maps-api/> (explaining various applications that utilize Google Maps API) (last visited Oct. 31, 2019).

58. See Ben Popper, *Twitter Follows Facebook Down the Walled Garden Path*, THE VERGE (July 9, 2012, 10:42 AM), <http://www.theverge.com/2012/7/9/3135406/twitter-api-open-closed-facebook-walled-garden> (commenting on Twitter’s move from an “open platform” to a “closed off platform,” or a

players are shifting to “walled garden” models, restricting API access and diminishing Internet interoperability.<sup>59</sup> “Walled gardens” refer to platforms that, previously open, now substantially limit third-party access to their information and services with code- and contract-based barriers.<sup>60</sup> Some deride this shift to “walled gardens” as the dystopian antithesis of open Internet goals,<sup>61</sup> while others see “walled gardens” as the natural end point of company maturation and the development of a sustainable revenue model.<sup>62</sup> Ideology aside, “walled garden” APIs definitively reduce interoperability by setting up formidable barriers to third-party access of platform data, reducing innovation of platform-dependent apps and equipping these dominant players with the ability to unilaterally alter API conditions.<sup>63</sup>

An already concentrated online market engenders further concentration. For one, venture capitalists (“VCs”) have driven market concentration. The tech sector contains many startups not projected to

---

“walled garden”). See generally Geoffrey G. Parker & Marshall W. Van Alstyne, *Two-Sided Network Effects: A Theory of Information Product Design*, 51 MGMT. SCI. 1494 (2005) (explaining two-sided network externalities and how they enable profitable provision of products to one set of users for free).

59. See Charlie Terenzio, *How Walled Gardens Like Facebook Are Cannibalizing Media Publishers*, FORBES (June 6, 2018, 8:30 AM), <https://www.forbes.com/sites/forbescommunicationscouncil/2018/06/06/how-walled-gardens-like-facebook-are-cannibalizing-media-publishers/>; see also MG Siegler, *This Is Business, Not Personal.*, TECHCRUNCH (Feb. 19, 2011, 4:39 PM), <https://techcrunch.com/2011/02/19/this-is-business-not-personal/>.

60. See Michael H. Wolk, Note, *The iPhone Jailbreaking Exemption and the Issue of Openness*, 19 CORNELL J.L. & PUB. POL’Y 795, 797–98 (2010) (“A walled garden is a system where an entity controls as many aspects of a product as possible and where features are only available if approved by a central authority.”).

61. See Ryan Holmes, *From Inside Walled Gardens, Social Networks Are Suffocating the Internet as We Know It*, FAST COMPANY (Aug. 9, 2013), <https://www.fastcompany.com/3015418/from-inside-walled-gardens-social-networks-are-suffocating-the-internet-as-we-know-it>; see also ZITTRAIN, *supra* note 22, at 80–84 (presenting the dystopian view of closed, proprietary communities and discussing how the incentive to innovate and innovation itself is reduced when systems are closed off or proprietary).

62. See Tim van den Bosch, *The Rise of the Closed APIs*, MEDIUM (July 12, 2016), <https://blog.deptagency.com/the-rise-of-the-closed-apis-6bd70a353fd5> (describing the final closed phase as the phase “where only special partner programs give access to the platform API and informal one-off usage is fully discouraged, [and] almost all public access is blocked”).

63. See Holmes, *supra* note 61.



turn a profit for years, entirely reliant on external investments.<sup>64</sup> At first, VCs took gambles on nascent companies with potential, focusing on their “exit” potential (or acquisition by a dominant player).<sup>65</sup> Later on, VCs began concentrating their funding on a smaller number of more mature tech companies rather than spurring innovation by funding embryonic startups.<sup>66</sup> And now, well-funded market players, either through VCs or through initial public offerings (“IPOs”), have the ability to buy out future competitors and acquire complementary products to internalize their features.<sup>67</sup> After a major merger or acquisition, tech companies undergo massive reorganizations to accommodate the new company, including a transformation of APIs to begin the process of integrating the new addition’s technology into a legacy system.<sup>68</sup> APIs

---

64. See Erin Griffith, *Silicon Valley Is Trying Out a New Mantra: Make a Profit*, N.Y. TIMES (Oct. 8, 2019), <https://www.nytimes.com/2019/10/08/technology/silicon-valley-startup-profit.html>. Today, \$100 million investments are no longer the outlier, but the norm. Erin Griffith, *\$100 Million Was Once Big Money for a Start-Up. Now, It’s Common.*, N.Y. TIMES (Aug. 14, 2018), <https://www.nytimes.com/2018/08/14/technology/venture-capital-mega-round.html>.

65. See *Early Exits: Nearly Half of Tech Startups Exit at the Early-Stage*, CB INSIGHTS (Mar. 10, 2016), <https://www.cbinsights.com/research/tech-companies-exit-early-stage/>; Jeff Desjardins, *The Biggest Tech Companies in the World Have Bought Up A Lot of Smaller Startups*, BUS. INSIDER (Mar. 4, 2018, 1:22 PM), <https://www.businessinsider.com/big-tech-companies-buying-smaller-startups-2018-3>.

66. Victor Basta, *There’s an Implosion of Early-Stage VC Funding, and No One’s Talking About It*, TECHCRUNCH (Nov. 30, 2017, 6:00 PM), <https://techcrunch.com/2017/11/30/theres-an-implosion-of-early-stage-vc-funding-and-no-ones-talking-about-it/>.

67. See, e.g., Matt Reynolds, *If You Can’t Build It, Buy It: Google’s Biggest Acquisitions Mapped*, WIRED (Nov. 25, 2017), <https://www.wired.co.uk/article/google-acquisitions-data-visualisation-infoporn-waze-youtube-android> (detailing the acquisitions made by Google and its parent company Alphabet over the past twenty years). Companies purchase smaller companies or participate in mergers to improve adaptability, gain new talent, improve synergies, and acquire fixed assets. See Barclay Palmer, *Why Do Companies Merge With or Acquire Other Companies*, INVESTOPEDIA (July 28, 2019), <https://www.investopedia.com/ask/answers/why-do-companies-merge-or-acquire-other-companies/>.

68. See *Mergers and Acquisitions: Overcoming Post Merger Integration Challenges*, MULESOFT, <https://www.mulesoft.com/resources/cloudhub/mergers-acquisitions-it-integration> (last visited Nov. 1, 2019); Suzanne Rose, *Agile M&A: Hit the Ground (with All Data) Running on Day One*, PROGRESS (Dec. 20, 2016),

were designed to facilitate mutually beneficial information transactions between competitors, but when one company buys up Park Place and Boardwalk in Monopoly, they no longer have an incentive to cooperate with others.

Companies can reduce interoperability by restricting API access after an acquisition. For example, after Facebook acquired Instagram in 2012 for \$1 billion, it immediately began integrating the platform into traditional Facebook features.<sup>69</sup> Notably, it altered Instagram's API within months of the purchase to prevent users from cross-posting photos generated for Instagram onto Twitter, thereby preventing Twitter users from accessing Instagram content directly.<sup>70</sup> Facebook's goal was to drive activity to Instagram's native platform directly rather than have users interact with Instagram content through other, and at the time more dominant, social media avenues.<sup>71</sup> But in doing so, Facebook hurt Twitter's dynamism as a platform by reducing Twitter's access to high-quality, third-party content.<sup>72</sup> In response, Twitter deleted its app from the Facebook ecosystem.<sup>73</sup> Instagram's newly restrictive API halted the trend of building one-off, third-party projects, such as hashtag driven campaigns or event promotion.<sup>74</sup>

---

<https://www.progress.com/blogs/agile-ma-pre-and-post-merger-data-integration-guide>.

69. *Facebook Buys Instagram for \$1 Billion, Turns Budding Rival into Its Standalone Photo App*, TECHCRUNCH (Apr. 9, 2012), <https://techcrunch.com/2012/04/09/facebook-to-acquire-instagram-for-1-billion/>.

70. *See* Leena Rao, *Instagram Photos Will No Longer Appear in Twitter Streams at All*, TECHCRUNCH (Dec. 9, 2012, 1:56 PM), <https://techcrunch.com/2012/12/09/it-appears-that-instagram-photos-arent-showing-up-in-twitter-streams-at-all/> (explaining that the changes were intended to drive more traffic to Instagram's newly revamped web application).

71. *See id.*

72. *See* Jim Edwards, *How Facebook's Acquisition of Instagram Has Hurt Brands That Use Twitter*, BUS. INSIDER (May 14, 2013, 10:13 AM), <https://www.businessinsider.com/how-facebooks-acquisition-of-instagram-has-hurt-brands-that-use-twitter-2013-5>.

73. Sarah Perez, *Twitter's Deletion of Its Facebook App Caused Old Cross-posts to Temporarily Disappear*, TECHCRUNCH (Aug. 28, 2018, 4:38 PM), <https://techcrunch.com/2018/08/28/facebook-has-removed-all-cross-posted-tweets/>.

74. *See* Karoline Miles, *Instagram API Changes: How It Will Affect Your Business*, TAGGBOX (Nov. 27, 2018), <https://taggbox.com/blog/instagram-api-changes-and-how-affect-business/>; *see also* Sarah Parker, *How Brands Can Use Tagging and*

In a concentrated market with a dearth of options, dominant players can further reduce interoperability by making the conditions of API access prohibitive. Although tech companies are notorious for evading profitability for unfathomably long periods of time, all companies ultimately seek revenue. Google Maps's API, one of the most dominant geolocation services available, has recently capitalized on the market's reliance on its services to increase the price associated with making API "calls"—or discrete requests for information.<sup>75</sup> When controlling for quantity and cadence of API calls, developers reported an over 1,400% increase in the costs for using the Maps platform.<sup>76</sup> In addition to these increased costs, Google has required API users to hand over billing information regardless of whether or not they incur any costs.<sup>77</sup> Most significantly, native Android app developers are protected from these changes because Google will not be implementing these new cost structures in its Mobile Native Static and Dynamic Maps APIs—the unique APIs built for use by Android developers.<sup>78</sup> Ergo, Google, through its APIs, demonstrates favoritism or exceptionalism for the mobile operating system it owns.

Restrictive APIs are by no means per se unreasonable or anti-competitive. Most online platforms generate revenue through advertising, and the "walled garden" model helps platforms curate more personalized, effective advertising schemes.<sup>79</sup> Additionally, restricting

---

*Mentions on Instagram*, UNION METRICS (May 7, 2018), <https://unionmetrics.com/blog/2018/05/brands-can-use-tagging-mentions-instagram/>.

75. *The Top 10 Mapping and Maps APIs (for Developers in 2018)*, RAPIDAPI: LAST CALL BLOG (June 4, 2018), <https://blog.rapidapi.com/top-map-apis/>.

76. See Ishveena Singh, *Insane, Shocking, Outrageous: Developers React to Changes in Google Maps API*, GEOAWESOMENESS (May 3, 2018), <https://geoawesomeness.com/developers-up-in-arms-over-google-maps-api-insane-price-hike/>.

77. *Id.*

78. *Id.*

79. See Pierre de Poulpique, *What Is a Walled Garden? And Why Is It the Strategy of Google, Facebook and Amazon Ads Platform?*, MEDIUM (Nov. 3, 2017), <https://medium.com/mediarithmics-what-is/what-is-a-walled-garden-and-why-it-is-the-strategy-of-google-facebook-and-amazon-ads-platform-296ddeb784b1>. Restrictive APIs give the dominant player full control over the type of ads displayed on the platform and how they are displayed to users. See *id.* This allows these players to optimize their marketing schemes based on the personalized user information collected over time and business intelligence generated without having to share this information with advertisers. See *id.*

access to APIs limits the ability for low-quality third-party applications to dilute the company's brand by association.<sup>80</sup> Finally, data security concerns have also driven decisions to fortify "walled gardens."<sup>81</sup> Facebook and Facebook-owned Instagram responded to the Cambridge Analytica data leak and API-enabled data breach by severely curtailing third-party access to user information by putting restrictive conditions on their APIs.<sup>82</sup> This move gave Facebook more control over who is accessing information, how much information they are accessing, what they plan to use it for, and whether they are complying with API use conditions.<sup>83</sup> Users were duly indignant at the open and unmonitored nature of APIs, but the appropriately placed frustration has since evolved into the belief that there is an unavoidable zero-sum game between interoperability and information security.<sup>84</sup>

Just as all monopolies are not per se injurious to competition or the public,<sup>85</sup> not all API-restricted walled gardens are problematic. But,

---

80. See Matthew Hughes, *Twitter to Place New Restrictions on Its API to Stop Abuse*, NEXT WEB (July 24, 2018), <https://thenextweb.com/twitter/2018/07/24/twitter-to-place-new-restrictions-on-its-api-to-stop-abuse/>. Mitigating the risk of low-quality content improves user experience, increasing user interaction with the platform, which generates more revenue for the dominant player when the users confront more ads. See Popper, *supra* note 58.

81. See Gennie Gebhart, *How to Change Your Facebook Settings to Opt Out of Platform API Sharing*, ELECTRONIC FRONTIER FOUND. (Mar. 19, 2018), <https://www.eff.org/deeplinks/2018/03/how-change-your-facebook-settings-opt-out-platform-api-sharing>.

82. See Peter Martinez, *Facebook CEO Mark Zuckerberg Breaks Silence, Admits "Breach of Trust"*, CBS NEWS (Mar. 21, 2018, 7:14 PM), <https://www.cbsnews.com/news/mark-zuckerberg-facebook-ceo-cambridge-analytica-data-scandal-statement-today-2018-03-21/>; see also Mike Isaac & Sheera Frenkel, *Facebook Security Breach Exposes Accounts of 50 Million Users*, N.Y. TIMES (Sep. 28, 2018), <https://www.nytimes.com/2018/09/28/technology/facebook-hack-data-breach.html>.

83. See Mike Schroepfer, *An Update on Our Plans to Restrict Data Access on Facebook*, FACEBOOK: NEWSROOM (Apr. 4, 2018), <https://newsroom.fb.com/news/2018/04/restricting-data-access/>.

84. See Ben Thompson, *Open, Closed, and Privacy*, STRATECHERY (Apr. 25, 2018), <https://stratichery.com/2018/open-closed-and-privacy/>.

85. See, e.g., *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004) ("[P]ossession of monopoly power . . . is an important ele-

as with monopolies, we rely on competition law to redress impermissible business practices. The question remains: can it?

### III. COMPETITION LAW: A LAY OF THE LAND

The competition law toolkit comprises of traditional antitrust causes of action and more flexible regulatory enforcement actions. The Sherman and Clayton Acts comprise traditional antitrust, while Section 5 of the FTC Act represents a novel, still not fully realized, potential authority to hold anticompetitive practices accountable. Together, they aspire “to protect the process of competition for the benefit of consumers.”<sup>86</sup> When antitrust laws work, they ensure “there are strong *incentives* for businesses to operate efficiently, keep prices down, and keep quality up.”<sup>87</sup> But competition is not an end goal, an outcome that can be objectively measured against a rubric; rather, competition is the existence of certain conditions considered ideal for the effective functioning of market forces.<sup>88</sup> These conditions include maintaining dispersion of economic power<sup>89</sup> and preserving fair and open access to competition.<sup>90</sup> Although each of the three statutes promotes competition, traditional antitrust authorities remain ill-suited to provide the

---

ment of the free-market system. The opportunity to charge monopoly prices . . . attracts ‘business acumen’ . . . [and] induces risk taking that produces innovation and economic growth. To safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive *conduct*.”).

86. *The Antitrust Laws*, FED. TRADE COMMISSION, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/antitrust-laws> (last visited Nov. 2, 2019).

87. *Id.* (emphasis added).

88. See John B. Kirkwood, *Consumers, Economics, and Antitrust*, in 21 ANTITRUST LAW AND ECONOMICS 1, 31 (John B. Kirkwood ed., 2004).

89. See, e.g., *United States v. Von’s Grocery Co.*, 384 U.S. 270, 275 (1966) (“Like the Sherman Act in 1890 and the Clayton Act in 1914, the basic purpose of the 1950 Celler-Kefauver Act was to prevent economic concentration in the American economy by keeping a large number of small competitors in business.” (citing *United States v. Phila. Nat’l Bank*, 374 U.S. 321, 362–63 (1963); *United States v. Aluminum Co. of Am.*, 377 U.S. 271, 280 (1964))).

90. See *Standard Oil Co. of Cal. v. United States*, 337 U.S. 293, 314 (1949); *Int’l Salt Co. v. United States*, 332 U.S. 392, 396–98 (1947); *Fashion Originators’ Guild of Am., Inc. v. FTC*, 312 U.S. 457, 467–68 (1941).

oversight required to identify potentially anticompetitive APIs. Section 5 authorities, however, are uniquely positioned to take up the mantle.

*A. The Traditional Antitrust Toolkit*

Traditional antitrust authorities include statutes prohibiting restraints on trade and monopolization. First, the Sherman Act was passed in 1890 to prohibit “every contract, combination, or conspiracy in restraint of trade” (Section 1) and any “monopolization, attempted monopolization, or conspiracy or combination to monopolize” (Section 2).<sup>91</sup> In 1911, the Supreme Court interpreted the Sherman Act to function through an implicit “rule of reason” that did not prohibit all restraints of trade, or all monopolies, but only unreasonable restraints.<sup>92</sup>

Second, Congress passed the Clayton Act in 1914 to address specifically the market implications of mergers and acquisitions.<sup>93</sup> Section 7 of the Clayton Act prohibits mergers and acquisitions when the effect “may be substantially to lessen competition, or to tend to create a monopoly”<sup>94</sup> in an effort to address incipient anticompetitive practices before the harm fully matures.<sup>95</sup> Subsequent amendments to the

---

91. *The Antitrust Laws*, *supra* note 86.

92. *Standard Oil Co. of N.J. v. United States*, 221 U.S. 1, 59–62 (1911). There are per se violations of the Sherman Act that do not warrant defenses or justifications of reasonableness, but otherwise, the government must demonstrate that the business judgment was unreasonable against the market context to succeed in a Section 1 or 2 claim. *See* FED. TRADE COMM’N & U.S. DEP’T OF JUSTICE, ANTITRUST GUIDELINES FOR COLLABORATIONS AMONG COMPETITORS 3–4 (2000), [https://www.ftc.gov/sites/default/files/documents/public\\_events/joint-venture-hearings-antitrust-guidelines-collaboration-among-competitors/ftcdojguidelines-2.pdf](https://www.ftc.gov/sites/default/files/documents/public_events/joint-venture-hearings-antitrust-guidelines-collaboration-among-competitors/ftcdojguidelines-2.pdf).

93. *See The Antitrust Laws*, *supra* note 86; *see also* Clayton Antitrust Act of 1914, Pub. L. No. 63-212, 38 Stat. 730 (current version at 15 U.S.C. §§ 12–27 (2018)).

94. *The Antitrust Laws*, *supra* note 86.

95. *See Brown Shoe Co. v. United States*, 370 U.S. 294, 322 n.37 (1962); Eleanor M. Fox, *Antitrust, Mergers, and the Supreme Court: The Politics of Section 7 of the Clayton Act*, 26 *MERCER L. REV.* 389, 392 n.7 (1975).

Clayton Act served to ban discriminatory prices, services, and allowances in dealings between competitors in a market to preserve dispersion of economic power.<sup>96</sup>

### B. Traditional Antitrust in the “New Economy”

Unfortunately, characteristics of the “new economy” frustrate traditional antitrust doctrines.<sup>97</sup> For one, antitrust law was designed with physical goods in mind.<sup>98</sup> Internet businesses, on the other hand, “(1) are more likely to depend on network effects for success; (2) allow [for] producers to effectively discontinue availability of and support for older products; and (3) can be changed with minimal or no effect on the user experience.”<sup>99</sup> These unique characteristics mean that the value of a platform cannot be measured using traditional frameworks.

Platforms dependent on network effects flip the equation on antitrust value assessment. Traditionally, antitrust assumes that products trend when society deems them valuable, but online businesses reciprocally gain value as they trend because their services either require or benefit from economies of scale in consumption.<sup>100</sup> Like telecommunications networks, some online platforms are not valuable until they surpass an initial critical mass of users for each individual user to find value in the platform; once that critical mass is present, each additional user after that generally returns only marginal value to each preexisting

---

96. See Robinson-Patman Act of 1936, Pub. L. No. 74-692, 49 Stat. 1526 (codified as amended at 15 U.S.C. §§ 13, 13a, 21a (2018)); Celler-Kefauver Act of 1950, Pub. L. No. 81-899, 64 Stat. 1125 (codified as amended at 15 U.S.C. §§ 18 (2018)). These statutes reflect an attempt to provide greater economic opportunity for entrepreneurs and businesses without market power. See 51 CONG. REC. 9088 (1914) (statement of Rep. Mitchell); *Id.* at 14,326 (statement of Sen. Chilton); 96 CONG. REC. 16,452 (1950) (statement of Sen. Kefauver); *Id.* at 16,503–04 (statement of Sen. Aiken); 95 CONG. REC. 11,506 (1949) (statement of Rep. Bennett).

97. See Richard A. Posner, *Antitrust in the New Economy*, 68 ANTITRUST L.J. 925, 925–26 (2001). The “new economy” is a term Judge Richard Posner used to denote network-technology-specific industries, including and most relevant to this Article, the sector of “Internet-based businesses (Internet access providers, Internet service providers, Internet content providers), such as AOL and Amazon.” *Id.* at 925.

98. See *id.* at 926.

99. Arsdale & Venzke, *supra* note 39, at 244–45.

100. See Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CALIF. L. REV. 479, 491–95 (1998).

network user.<sup>101</sup> For example, a phone company with one user provides no value because there is no one to call. A phone company that serves all of the members of a family, but no one else, is more valuable because it provides a platform for communication. But even more valuable would be a phone company serving a wide, diverse network of users.<sup>102</sup> As users grow accustomed to the benefit of a network, the switching costs of moving off the platform and forfeiting said network increase, locking them into a particular service.<sup>103</sup> Even if the online business does not require a network of interacting users, market dominance still benefits an online platform because popularity, or high service consumption, increases its perceived value (success begets success) and perceived switching costs (product “Fear of Missing Out” FOMO).<sup>104</sup> Therefore, traditional assumptions that the availability of competitors implies a well-functioning competitive market fails because, while these competitors are “just one click away,” users are less inclined to explore these options than with traditional products.<sup>105</sup>

Consumers cannot express opinion through market choices when online platforms can discontinue service unilaterally or make product changes unbeknownst to consumers. Traditional antitrust relies on consumer behavior as a proxy for market harm, assuming that consumers make well-informed decisions about product value.<sup>106</sup> For example, a defense to predatory innovation, or altering preexisting products with anticompetitive purpose, is consumer acceptance, or demonstrating that consumers recognize the change in the product and the impact to the marketplace but accept it nonetheless.<sup>107</sup> However, features unique to APIs undermine the functionality of this defense and

---

101. See Posner, *supra* note 97, at 928.

102. To extend the analogy, a phone company that does not allow users to interact with individuals from another phone company is less valuable than one that does. See *id.* The ability to call an AT&T user from a Verizon phone is an example of interoperability.

103. See Khan, *supra* note 45, at 752–53.

104. See *id.* at 753; see also Adam Candeub, *Behavioral Economics, Internet Search, and Antitrust*, 9 I/S: J.L. & POL’Y FOR INFO. SOC’Y 407, 410–11 (2014).

105. See Khan, *supra* note 45, at 753 (2017); see also Candeub, *supra* note 104, at 409 (“[O]nline market behavior may differ from the brick and mortar world . . . . In particular, behavioral tendencies related to habit and information costs may disrupt conventional economic assumptions.”).

106. See Arsdale & Venzke, *supra* note 39, at 260.

107. See *id.* at 255–56.



the reliance on consumer behavior broadly. First, consumers cannot immediately detect changes in the background code that restricts API access.<sup>108</sup> Second, continued use of the platform may not signal acceptance of the altered API because of the aforementioned switching costs of these Internet businesses and the sense of inelastic demand for the service.

Pedagogically, traditional antitrust doctrine is beholden to theoretical assumptions that shield a large gamut of internet-specific activities from scrutiny.<sup>109</sup> Consequently, antitrust analyses have a laser focus on empirical measures of anticompetitive impact, whether the analyst subscribes to the Chicago School of Economics or not.<sup>110</sup> The emphasis on economic efficiency in antitrust enforcement has dictated how administrations and courts evaluate “consumer welfare.” It has come to represent an aggregate measure of wealth maximization in society, without consideration of questions of distributive justice.<sup>111</sup> Some suggest that emphasis on economic efficiency<sup>112</sup> navigates the

---

108. *See id.* at 275–76.

109. *See* Salil K. Mehra, *Paradise Is Not a Walled Garden? Trust, Antitrust, and User Dynamism*, 18 GEO. MASON L. REV. 889, 914–27 (2011) (discussing the pitfalls of antitrust in addressing network effects and user-content driven markets online).

110. *See* Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J.L. & ECON. 7, 39–44 (1966); *see also* Michael S. Jacobs, *An Essay on the Normative Foundations of Antitrust Economics*, 74 N.C. L. REV. 219, 242 (1995) (“Despite their differences, post-Chicago and Chicago scholars share a common metric. They agree that wealth maximization should be the exclusive goal of antitrust policy, and antitrust enforcement should strive to achieve the highest practicable level of consumer welfare.”).

111. Posner asserts that the “wealth-redistribution argument . . . has no implications for the content of antitrust policy.” *See* RICHARD A. POSNER, *ANTITRUST LAW* 26 (2d ed. 2001).

112. *See* AM. BAR ASS’N, *REPORT ON ANTITRUST POLICY OBJECTIVES* 4 (2003), <http://www.abanet.org/antitrust/at-comments/2003/reports/policyobjectives.pdf> (“[O]ver time, the evolution of constitutional and economic theories and their perceived importance to antitrust review in combination with political, social and economic events, have led U.S. courts and antitrust agencies to adopt the current, more efficiencies-oriented, understanding of U.S. antitrust policy objectives as part of their interpretation and enforcement of federal antitrust legislation.”).

focus of antitrust inquiry away from the realities felt in society.<sup>113</sup> Others believe the term “consumer welfare” has been recast to serve as a more palatable and marketable term for aggregate utility.<sup>114</sup> Either way, the dogmatic focus on measurable indicators of harm “shifted the analytical emphasis away from *process*—the conditions necessary for competition—and toward an *outcome*—namely, consumer welfare.”<sup>115</sup> This focus misses the impact of anticompetitive practices on antidemocratic concentrations of political power, consumer choice reduction, or the intrinsic value of an open, interoperable Internet.<sup>116</sup>

Finally, shifts in the procedural landscape exacerbate the inaccessibility of antitrust lawsuits as a means for regulating API designs and Internet interoperability. From the very first stages of adjudication, potential plaintiffs face new barriers to seeking vindication through the courts. New pleading rules established by *Bell Atlantic Corp. v.*

---

113. John B. Kirkwood & Robert H. Lande, *The Fundamental Goal of Antitrust: Protecting Consumers, Not Increasing Efficiency*, 84 NOTRE DAME L. REV. 191, 199 (2008) (“Bork thus defined ‘consumers’ to include monopolists and cartels! Antitrust based on his definition of ‘consumer welfare’ makes no distinction between ‘real’ consumers—the purchasers of goods and services—and the firms with market power that raise prices and thereby extract wealth from purchasers.”). The Bush administration’s first FTC Chair, Timothy J. Muris, wrote that efficiency enhancing mergers should be approved even if they resulted in higher consumer prices. Timothy J. Muris, *The Government and Merger Efficiencies: Still Hostile After All These Years*, 7 GEO. MASON L. REV. 729, 733 (1999) (“Another beneficial change in the 1997 Revised Merger Guidelines is the rejection of a rigid requirement that cost savings must be ‘passed on’ to consumers.”).

114. See Kirkwood & Lande, *supra* note 113, at 200 n.30, 206 n.58; William E. Kovacic, *The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago/Harvard Double Helix*, 2007 COLUM. BUS. L. REV. 1, 35, 35 n.105.

115. Khan, *supra* note 45, at 744 (citing Eleanor M. Fox, *Against Goals*, 81 FORDHAM L. REV. 2158, 2158 (2013)).

116. See Robert Pitofsky, *The Political Content of Antitrust*, 127 U. PA. L. REV. 1051, 1064 (1979) (“Virtually all proponents of the [Celler–Kefauver Act amending Clayton Act Section 7 merger review authority] who spoke asserted that the merger trend must be blocked because concentrated economic power would lead to increased government control, because freedom would corrode and totalitarianism prosper, and because absentee ownership by large corporations would diminish local initiative and civic responsibility.” (citing Derek C. Bok, *Section 7 of the Clayton Act and the Merging of Law and Economics*, 74 HARV. L. REV. 226, 235–36 (1960))).

*Twombly* and later affirmed in *Ashcroft v. Iqbal* place considerable hurdles in the way of private plaintiffs pursuing Sherman Act claims by forcing such plaintiffs to be able to present in a well-pleaded complaint sufficient facts to present a compelling case that anticompetitive behavior is plausible, a tall order given the confidential nature of most business practices and the inability to rely on discovery to research content to draft the pleading.<sup>117</sup> Many believe “the heightened procedural standards erected in the past few decades have” cropped up in antitrust suits because parties and courts were motivated by the fear of chilling precompetitive business practices with the threat of treble damages under the Sherman Act.<sup>118</sup> These barriers suggest extrajudicial modes of enforcement, namely FTC administrative actions, may be more effective.

### C. Traditional Antitrust Enforcement

The aforementioned conceptual shortcomings of traditional antitrust manifest in both merger and business practice-based cases. With an emphasis on judicial constraint and underlying faith in free market forces, the court applies the “rule of reason.” This is the principle that the Sherman Act does not prohibit *every* merger or restraint of trade, only those that are *unreasonable*.<sup>119</sup> The assumptions of traditional antitrust<sup>120</sup> have limited the set of actionable Sherman violations. If the plaintiff is able to present a prima facie case that meets the “plausibility” pleading requirement, the defendant then must prove that the challenged activity produces “procompetitive” benefits that outweigh the

---

117. See A. Benjamin Spencer, *Plausibility Pleading*, 49 B.C. L. REV. 431, 460 (2008) (“[The plausibility standard] is likely to impose a more onerous burden in those cases where a liberal notice pleading standard is needed most: actions asserting claims based on states of mind, secret agreements, and the like, creating a class of disfavored actions in which plaintiffs will face more hurdles to obtaining a resolution of their claims on the merits.” (citing Christopher M. Fairman, *Heightened Pleading*, 81 Tex. L. Rev. 551, 553–54 (2001))); see also *Ashcroft v. Iqbal*, 556 U.S. 662 (2009); *Bell Atl. Corp. v. Twombly*, 550 U.S. 544 (2007).

118. Amy Marshak, *The Federal Trade Commission on the Frontier: Suggestions for the Use of Section 5*, 86 N.Y.U. L. REV. 1121, 1122 (2011).

119. See *Standard Oil Co. of N.J. v. United States*, 221 U.S. 1, 59–62 (1911).

120. See *supra* Section II.B.

harm implicit in a plaintiff's prima facie case.<sup>121</sup> The plaintiff can then only prevail by showing that the same or substantially similar benefits can be realized through a "less restrictive alternative."<sup>122</sup> Companies usually provide APIs voluntarily, so the government is hard pressed to demonstrate that their decision to restrict, *ex ante*, the APIs creates harm to society that outweighs the benefit to the company of maintaining market dominance.

### 1. Mergers and Acquisitions

Merger actions, one avenue of traditional antitrust enforcement, are ill-suited for addressing APIs because at the time of the merger the anticompetitive harm is often unrealized.<sup>123</sup> Mergers, such as the Facebook purchase of WhatsApp and Instagram, can lead to reduced interoperability because they increase market concentration and often spur internal software redesigns to restrict API access. The merging of two companies is not necessarily the problem but rather how they choose to technically integrate their platforms. In the domain of API assessments, the question is whether technical integration post-merger is going to foreclose competition. In other words, will the platform continue to allow third parties to negotiate API access to the information and features obtained through the merger?

---

121. Alan J. Meese, *Price Theory, Competition, and the Rule of Reason*, 2003 U. ILL. L. REV. 77, 79–80.

122. *Id.*

123. *See infra* text accompanying note 131 (discussing the growing scrutiny of Facebook's purchase of WhatsApp and Instagram after the fact); *see also infra* text accompanying note 138 (analyzing anticompetitive acts by Google years after acquiring YouTube). Sections 1 and 2 of the Sherman Act and Section 7 of the Clayton Act both authorize the DOJ and the FTC to assess proposed mergers for impermissible harms to competition or consumer welfare. *See* Sherman Act, 15 U.S.C. §§ 1–2 (2018) ("Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States . . . is declared to be illegal[.]" and actions taken by parties to "monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States . . . shall be deemed guilty of a felony."); Clayton Act § 7, 15 U.S.C. § 18 (2018) ("No person engaged in commerce . . . shall acquire . . . the whole or any part of the stock or . . . the assets of another person engaged also in commerce . . . the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly.").

In theory, traditional antitrust should be able to challenge horizontal mergers such as the additions to the Facebook Family through the doctrines of monopolization,<sup>124</sup> attempted monopolization,<sup>125</sup> or the theory that it “substantially lessen[s] competition.”<sup>126</sup> Past merger reviews have recognized that barriers to innovation can qualify as cognizable competition harms in their own right by reducing consumer options or, at the very least, signal potential harm to competitive processes.<sup>127</sup> The new Merger Guidelines reflect the new concerns with stifling innovation and the importance of a variety of products for meaningful consumer choice.<sup>128</sup> For example, in 2014, the DOJ successfully challenged Bazaarvoice’s acquisition of PowerReviews, both

---

124. The elements of a monopolization claim are “(1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.” *United States v. Grinnell Corp.*, 384 U.S. 563, 570–71 (1966).

125. The elements of an attempt claim are “[1] predatory or anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power.” *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 456 (1993).

126. Clayton Act § 7, 15 U.S.C. § 18 (2018); *see also* *United States v. H&R Block, Inc.*, 833 F. Supp. 2d 36, 48–50 (D.D.C. 2011).

127. *See* *Silicon Graphics, Inc.*, 120 F.T.C. 928, 933 (1995), 1995 WL 17012686; *see also* U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, HORIZONTAL MERGER GUIDELINES 23–24 (2010), <https://www.justice.gov/sites/default/files/atr/legacy/2010/08/19/hmg-2010.pdf>.

128. *See* Herbert Hovenkamp, *Merger Policy and the 2010 Merger Guidelines* 3–4 (Univ. Iowa Legal Studies, Research Paper No. 10-34, 2010), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1693246](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1693246); *see also* Richard J. Gilbert & Hillary Greene, *Merging Innovation into Antitrust Agency Enforcement of the Clayton Act*, 83 GEO. WASH. L. REV. 1919, 1930–31 (2015). Former FTC Commissioner Terrell McSweeney has stated that “innovation can also be a key factor when a merger might eliminate an independent disruptive innovator.” Terrell McSweeney, Commissioner, Fed. Election Comm’n, *Understanding Innovation and Its Role in U.S. Merger Review 2* (Mar. 16, 2017) (transcript available at [https://www.ftc.gov/system/files/documents/public\\_statements/1176893/berlin\\_international\\_conference\\_on\\_competition\\_final.pdf](https://www.ftc.gov/system/files/documents/public_statements/1176893/berlin_international_conference_on_competition_final.pdf)).

services engaged in online product ratings and reviews, though it did not amount to a true monopoly claim.<sup>129</sup>

However, these doctrines present a high bar. Even under the lower “substantially lessens competition” test, the harm must be ripe for enforcement measures to be imposed. Unless the DOJ or the Commission can demonstrate with evidence that the proposed merger will in fact harm innovation in a way that injures competition or consumer welfare, the agencies cannot invoke Sherman or Clayton to block or impose conditions on the merger.<sup>130</sup> Facebook’s acquisition of Instagram and WhatsApp were found to present no demonstrative harm to the competitive market at the time of these transactions, but now the FTC has retroactive concerns about Facebook’s motivations behind the deal.<sup>131</sup>

---

129. See Third Amended Final Judgment at 2, *United States v. Bazaarvoice, Inc.*, No. 3:13-cv-00133-WHO (N.D. Cal. Dec. 2, 2014), ECF 286, <https://www.justice.gov/atr/case-document/file/488816/download>. In its complaint, the United States alleged that “[d]uring its diligence process for the transaction, Bazaarvoice anticipated that the assimilation of major PowerReviews retailers into the Bazaarvoice network would ‘further increase[] . . . switching costs’ and ‘deepen[] [its] protective moat.’” Complaint at 19, *United States v. Bazaarvoice, Inc.*, No. C13 0133 JSC (N.D. Cal. Jan. 10, 2013), 2013 WL 127168 (second alteration in original) (third alteration in original) (fourth alteration in original). Further, “Bazaarvoice claimed that it competes in a ‘winner-take-all’ market, and identified its ‘ability to leverage the data’ from its customer base as ‘a key barrier [to] entry.’” *Id.* at 18 (alteration in original).

130. See Statement of Federal Trade Commission Concerning Google/DoubleClick, *In re Google/DoubleClick*, FTC File No. 071-0170, at 2–3 (Dec. 20, 2007), [https://www.ftc.gov/system/files/documents/public\\_statements/418081/071220googledc-commstmt.pdf](https://www.ftc.gov/system/files/documents/public_statements/418081/071220googledc-commstmt.pdf); *Federal Trade Commission Closes Google/DoubleClick Investigation*, FED. TRADE COMMISSION (Dec. 20, 2007), <https://www.ftc.gov/news-events/press-releases/2007/12/federal-trade-commission-closes-googledoubleclick-investigation>. For example, the Google and DoubleClick merger was not challenged by the FTC in 2007 because it could not show that the acquisition would substantially lessen competition under traditional antitrust law. *Federal Trade Commission Closes Google/DoubleClick Investigation*, FED. TRADE COMMISSION (Dec. 20, 2007), <https://www.ftc.gov/news-events/press-releases/2007/12/federal-trade-commission-closes-googledoubleclick-investigation>.

131. See Brent Kendall et al., *FTC Antitrust Probe of Facebook Scrutinizes Its Acquisitions*, WALL ST. J. (Aug. 1, 2019, 6:17 PM), <https://www.wsj.com/articles/ftc-antitrust-probe-of-facebook-scrutinizes-its-acquisitions-11564683965>; David McCabe, *FTC Said to Look at Facebook’s Instagram and Whatsapp Purchases*,

The FTC recognizes that mergers can prove to be deleterious after several years even if they did not raise flags *ex ante*.<sup>132</sup> Should the merger prove harmful after the fact, antitrust agencies face a Sisyphean task in “unscrambling the eggs” after API software has been fundamentally altered to integrate systems completely.<sup>133</sup> Disentangling two platforms that have been merged digitally, in that they share a common code base, can prove economically infeasible. Asking companies to separate their platforms after integration can impose prohibitive costs on the company and disrupt user experience extensively as coders attempt to rewrite the code supporting the platform.<sup>134</sup> This creates an added incentive for companies to technologically integrate their platforms. Days after members of Congress called for Facebook’s products to be separated, the platform announced its plans to inextricably integrate its services.<sup>135</sup> Many see this as a defensive measure, decrying regulatory action.<sup>136</sup>

---

AXIOS (Aug. 2, 2019), <https://www.axios.com/ftc-said-to-look-at-facebooks-instagram-and-whatsapp-purchases-984eef3b-9d9e-46a1-a3d7-d9e0d555efcc.html>; *see also* Alexei Oreskovic, *FTC Clears Facebook’s Acquisition of Instagram*, REUTERS, Aug. 22, 2012, <https://www.reuters.com/article/us-facebook-instagram/ftc-clears-facebooks-acquisition-of-instagram-idUSBRE87L14W20120823>; Alexei Oreskovic, *Facebook Says WhatsApp Deal Cleared by FTC*, REUTERS, Apr. 10, 2014, <https://www.reuters.com/article/us-facebook-whatsapp/facebook-says-whatsapp-deal-cleared-by-ftc-idUSBREA391VA20140410>.

132. *See Mergers*, FED. TRADE COMMISSION, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/mergers> (last visited on Nov. 5, 2019). Generally, merger reviews are forward-looking in that they seek to bar or restrict mergers that *may* have future harmful effect. *Id.* But agencies also investigate completed mergers that subsequently appear to have harmed consumers. *Id.*

133. *See* Michael L. Katz & Howard A. Shelanski, *Merger Policy and Innovation: Must Enforcement Change to Account for Technological Change?*, 5 INNOVATION POL’Y & ECON. 109, 126–27 (2005).

134. *See* Mike Isaac, *How Facebook Is Changing to Deal with Scrutiny of Its Power*, N.Y. TIMES (Aug. 12, 2019), <https://www.nytimes.com/2019/08/12/technology/facebook-antitrust.html>.

135. *See id.*

136. *See* Makena Kelly, *Facebook Plans to Tie Itself Together as Regulators Debate Tearing It Apart*, THE VERGE (Mar. 7, 2019, 12:18 PM), <https://www.theverge.com/2019/3/7/18254717/facebook-instagram-whatsapp-regulation-antitrust-mark-zuckerberg-klobuchar-hawley-blumenthal>.

As with the Facebook messaging integration, sometimes it takes years for the company to take advantage of its subsidiaries to anticompetitive ends. If enough time has passed, the anticompetitive behavior made possible by the merger can likely no longer be challenged under the relatively lower Section 7 of the Clayton Act but, instead, must be challenged under a true Sherman antitrust claim.<sup>137</sup> Years after Google acquired YouTube, the company fundamentally redesigned YouTube's APIs to restrict certain operating systems from accessing the full gamut of content previously accessible by YouTube's API in a scheme that seemed designed to disadvantage Windows phones, a direct competitor of Google-owned Android.<sup>138</sup> The merger had gone through unhindered in 2006, so when these API restrictions were imposed, the activity had to be challenged under Sherman—if challenged at all.

## 2. Trade Practices

The second avenue of traditional antitrust enforcement extends beyond formal mergers to the day-to-day business practices of companies. These authorities under Sherman and Clayton focus on business practices, such as API redesigns, rather than challenging the essence or character of a company as a monopoly. Restrictive APIs can serve as anticompetitive business practices in three major ways: (1) they permit a company to select which third party is allowed to benefit from their data, foreclosing the participation of others entirely; (2) they can require the patronization of an unrelated product as a requirement for API access; or (3) they can provide API access at a prohibitive cost, unfairly excluding from the competitive process most otherwise meritorious players. Although three antitrust theories of harm seem directly on

---

137. See ORG. FOR ECON. CO-OPERATION & DEV., SUBMISSION OF THE UNITED STATES TO THE OECD WORKING PARTY NO. 3 ON CO-OPERATION AND ENFORCEMENT: INVESTIGATIONS OF CONSUMMATED AND NON-NOTIFIABLE MERGERS, 8–9 (2014), <https://www.justice.gov/sites/default/files/atr/legacy/2015/04/02/311222.pdf>.

138. See Benjamin Edelman, *Leveraging Market Power Through Tying: Does Google Behave Anti-Competitively?*, 23–28 (Harvard Bus. Sch., Working Paper No. 14-112, May 2014), [https://www.hbs.edu/faculty/Publication%20Files/google-tying-2014-10-26\\_b703d250-0f41-4787-a34f-d3bdba522348.pdf](https://www.hbs.edu/faculty/Publication%20Files/google-tying-2014-10-26_b703d250-0f41-4787-a34f-d3bdba522348.pdf).



point—“Refusal to Deal,” “Tying,” and “Essential Facilities”—all ultimately fall short.<sup>139</sup>

A company’s decision to narrow access to its information and features through a more restrictive API usually will not satisfy “Refusal to Deal” requirements. In the API context, this suspicious conduct would look like a firm designing its API only to serve some third-party partners at the exclusion of others. Users noticed that after acquiring Instagram, Facebook removed the ability to post Instagram content directly to its competitor, Twitter, leaving only the option to post content directly to Facebook.<sup>140</sup> Antitrust doctrine has consistently upheld the right for firms to exclude competitors, akin to a right to free association as a commercial entity.<sup>141</sup> Articulated another way, this principle rejects an affirmative duty to help competitors, unless the anticompetitive intentions are manifest and the business justifications appear pre-textual.<sup>142</sup> However, courts presume that refusals to deal are justified,<sup>143</sup> and later cases confirmed that an exception only applies when

---

139. See *Arsdale & Venzke*, *supra* note 39, at 276–84.

140. See *id.* at 277 (“Prior to Facebook’s acquisition of the photo sharing company, photos taken on the Instagram application could appear ‘in line’ on Twitter. Following the acquisition, however, Facebook eliminated this feature for Twitter, while retaining it for the primary Facebook network. Although Facebook made it far more appealing for users to post to Facebook rather than Twitter, the change seems unlikely to constitute a forced sale; Instagram users may still post links to their photos on Twitter, and—vitaly—are not required to post their content to Facebook at all.”).

141. See *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 408 (2004). This principle dates back 100 years to *United States v. Colgate & Co.* See 250 U.S. 300, 307 (1919) (“In the absence of any purpose to create or maintain a monopoly, the act does not restrict the long recognized right of trader or manufacturer engaged in an entirely private business, freely to exercise his own independent discretion as to parties with whom he will deal[.]”).

142. See *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 600–03 (1985). The Court there found significance in the defendant’s decision to cease participation in a cooperative venture or accept other profitable arrangements, betraying an anticompetitive intent. See *id.* at 608–11.

143. See *Lorain Journal Co. v. United States*, 342 U.S. 143, 155 (1951) (holding that newspaper with ninety-nine percent market share violated the Sherman Act when it refused to sell advertisements to businesses that also advertised on a newly opened radio station).

no feasibly valid business justification exists.<sup>144</sup> On the Internet, “[t]he complexities of breaks in interoperability suggest that a monopolist could always supply such a justification, especially when the dominant firm implements the break simultaneously with other changes.”<sup>145</sup>

API redesigns between merged companies are also likely to fall short of cases relying on “Tying” theories.<sup>146</sup> “Tying” doctrine requires the connection between the two platforms to amount to a forced sale, or the complete bar to one unless the individual uses the other.<sup>147</sup> When two companies merge, their API redesigns function similar to “Tying” strategies by conditioning the use of one platform on the use of the other, a “technological tie-in.”<sup>148</sup> But connected platforms may encourage, but tend not to require, the use of one to access the other. For example, several years after acquiring YouTube, Google piloted requiring users to make and use Google+ accounts to comment on YouTube videos, attempting to use the established dominance of the video platform as a parachute to save its otherwise failing attempt at a social media network.<sup>149</sup> However, Google walked this decision back after it drew public ire, and today most applications may allow you to use Facebook or Google to log in (especially when acquired by them) but do

---

144. See *Trinko*, 540 U.S. at 408–09 (“The leading case for [section] 2 liability based on refusal to cooperate with a rival, and the case upon which respondent understandably places greatest reliance, is *Aspen Skiing*. . . . *Aspen Skiing* is at or near the outer boundary of [section] 2 liability.”).

145. Arsdale & Venzke, *supra* note 39, at 280 (citing *Somers v. Apple, Inc. (In re Apple iPod iTunes Anti-Trust Litig.)*, Nos. C 05-00037 JW, C 07-06507 JW, 2010 WL 2629907, at \*7–8 (N.D. Cal. June 29, 2010)).

146. See *id.* at 276–78.

147. See *Foremost Pro Color, Inc. v. Eastman Kodak Co.*, 703 F.2d 534, 540 (9th Cir. 1983); see also *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 42–43 (2006) (holding that tying arrangements, such as true-monopoly or market-wide conspiracy involving patented products, must be supported by proof of power in the market rather than by presumption). The Supreme Court in *Jefferson Parish Hospital District No. 2 v. Hyde* held that the question of distinct markets “turns not on the functional relation between them, but rather on the character of the demand for the two items,” i.e., whether consumers seek them separately. 466 U.S. 2, 19 (1984).

148. See Daniel E. Gaynor, *Technological Tying* 1–2 (Fed. Trade Comm’n Bureau of Econ., Working Paper No. 284, Aug. 2006), [https://www.ftc.gov/sites/default/files/documents/reports/technological-tying/wp284\\_0.pdf](https://www.ftc.gov/sites/default/files/documents/reports/technological-tying/wp284_0.pdf).

149. See Edelman, *supra* note 138, at 1.

not require it.<sup>150</sup> They thereby fail the strict test for finding a forced sale because restrictive APIs that “tighten the connection between two of the monopolist’s products” may not amount to tying because technical alternatives, however inferior, to accessing the tied product exist.<sup>151</sup>

Finally, “essential facilities” theories have lost favor among the Court over time and are unlikely to succeed as methods to challenge restrictive APIs by dominant market players.<sup>152</sup> Theorists suggest treating dominant Internet business players as “essential facilities,” distinct from monopolies because their identifying characteristic is their

---

150. See Chris Welch, *Google+ and Youtube Are Finally Splitting Up*, THE VERGE (July 27, 2015, 12:58 PM), <https://www.theverge.com/2015/7/27/9047785/youtube-ditching-google-plus-requirement>.

151. Arsdale & Venzke, *supra* note 39, at 277 (“Prior to Facebook’s acquisition of the photo sharing company, photos taken on the Instagram application could appear ‘in line’ on Twitter. Following the acquisition, however, Facebook eliminated this feature for Twitter, while retaining it for the primary Facebook network. Although Facebook made it far more appealing for users to post to Facebook rather than Twitter, the change seems unlikely to constitute a forced sale; Instagram users may still post links to their photos on Twitter, and—vitaly—are not required to post their content to Facebook at all.”); see also *Somers v. Apple, Inc. (In re Apple iPod iTunes Anti-Trust Litig.)*, Nos. C 05-00037 JW, C 07-06507 JW, 2010 WL 2629907, at \*3 (N.D. Cal. June 29, 2010) (“Plaintiffs must allege facts showing that Apple engaged in anti-competitive conduct, with the specific intent to control prices or destroy competition, beyond the technological interoperability of iPods and media sold through the iTunes.” (citing *Foremost Pro Color*, 703 F.2d at 534)); *Foremost Pro Color*, 703 F.2d at 542 (“We do not believe that, standing alone, such technological interrelationship among complementary products is sufficient to establish the coercion essential to a *per se* unlawful tying arrangement.”).

152. See *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 410–11 (2004). Compare *Alaska Airlines, Inc. v. United Airlines, Inc.*, 948 F.2d 536, 545–46 (9th Cir. 1991) (“Although each defendant may have gained some leverage over its competitors through control of its CRS, each defendant’s power fell far short of the power to eliminate competition seen in *Otter Tail [Power Co v. United States]* and *MCI [Communications Co. v. AT&T]*. At most, defendants gained a monetary profit at their rivals’ expense. The exercise of this limited power is not actionable under Section 2.” (alteration in original)), with *Otter Tail Power Co. v. United States*, 410 U.S. 366, 368–72 (1973) (involving a utility company’s refusal to allow municipalities to use the utility company’s infrastructure source retail power from anyone other than the utility company as a traditional Section 2 case).

power over *access* to the marketplace as opposed to their market dominance.<sup>153</sup> Essential facilities must possess (and use) their market power to *eliminate* competition, not just present new barriers to competition.<sup>154</sup> Many have lodged allegations against Amazon for leveraging “its dominance across online retail and delivery in ways that involve tying, are exclusionary, and create entry barriers.”<sup>155</sup> The same critics still recognize that the behaviors are unlikely to run afoul of traditional refusal to deal or tying tests.<sup>156</sup> For example, merchants that use “Fulfillment by Amazon,”(FBA) (a service provided by an API) earn competitive advantages in search results over those who do not use FBA.<sup>157</sup> However, the Supreme Court has twice refused to adopt this theory as a valid theory of harm or acknowledge any unique duty on “essential facilities” to provide access to their facilities.<sup>158</sup> Second, the test conceived in lower courts couldn’t be applied to the Internet without the recognition of a monopoly.<sup>159</sup> Although certain players

---

153. See Sandeep Vaheesan, *Reviving an Epithet: A New Way Forward for the Essential Facilities Doctrine*, 2010 UTAH L. REV. 911, 951–59 (urging application of essential facilities to unregulated software platforms). Europe has invoked the doctrine more recently to analyze other types of facilities, including information products, software, and even interface specifications. See James Turney, *Defining the Limits of the EU Essential Facilities Doctrine on Intellectual Property Rights: The Primacy of Securing Optimal Innovation*, 3 NW. J. TECH. & INTELL. PROP. 179, 192 (2005).

154. See *Alaska Airlines*, 948 F.2d at 543–46.

155. Khan, *supra* note 45, at 779.

156. See *id.* at 779 n.352.

157. See *id.* at 779.

158. See *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 410–11 (2004); *Aspen Skiing Co. v. Aspen Highland Skiing Corp.*, 472 U.S. 585, 611 n.44 (1985). Lower courts have recognized “essential facilities” claims and the Seventh Circuit laid out a test for essential facilities claims: “(1) control of the essential facility by a monopolist; (2) a competitor's inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility.” *Intergraph Corp. v. Intel Corp.*, 195 F.3d 1346, 1357 (Fed. Cir. 1999) (citing *MCI Commc’ns Corp. v. Am. Tel. & Tel. Co.*, 708 F.2d 1081, 1132–33 (7th Cir. 1983)) (holding that the essential facilities doctrine did not apply to providing technical data to a non-competing entity).

159. See *Arsdale & Venzke*, *supra* note 39, at 282–84.

have earned market share in their respective fields that borders on monopoly, there are no legally recognized monopolies in the Internet sector—not even Amazon.<sup>160</sup>

The nature of restrictive APIs is that they are business decisions that possess but have not yet born out their risks of anticompetitive harm. It seems counterintuitive to have to wait for the death of competition by a thousand API alterations to address these practices legally. Luckily, Congress specifically anticipated and accounted for these scenarios in creating the FTC and authorized it to address anticompetitive practices and equipped it with the tools and flexibility to do so effectively.<sup>161</sup>

#### IV. SECTION 5 IN THEORY AND PRACTICE

Section 5's origin story contains all the ingredients to make it the ideal interoperability enforcement vehicle: a broad congressional mandate, consumer input, expert investigatory powers, and extrajudicial punitive measures. Congress, frustrated with the stagnant progress of antitrust enforcement under Sherman, wrote Section 5 with language intentionally more expansive than the Sherman and Clayton Acts<sup>162</sup> to

---

160. Despite its perceived dominance, Amazon does not qualify as a monopoly under traditional definitions nor been adjudicated as one. See Brittain Ladd, *Is Amazon a Monopoly? Donald Trump Thinks So*, FORBES (July 29, 2018, 1:16 PM), <https://www.forbes.com/sites/brittainladd/2018/07/29/amazon-is-not-a-monopoly-president-trump-yet/#6e0c7a584735>.

161. See Zeisler, Note, *Chevron Deference and the FTC: How and Why the FTC Should Use Chevron to Improve Antitrust Enforcement*, 2014 COLUM. BUS. L. REV. 266, 273–75 (“The differences between the Clayton and FTC Acts reinforce that Congress intended the interpretation of section 5 to be independent of other antitrust terms.”).

162. See S. REP. NO. 63-597, at 13 (1914) (“The committee gave careful consideration to the question as to whether it would attempt to define the many and variable unfair practices which prevail in commerce and to forbid their continuance or whether it would, by a general declaration condemning unfair practices, leave it to the commission to determine what practices were unfair. It concluded that the latter course would be the better, for the reason, as stated by one of the representatives of the Illinois Manufacturers' Association, that there were too many unfair practices to define, and after writing 20 of them into the law it would be quite possible to invent others.”).

permit the FTC to address the changing economic landscape and to rectify threats to competition on a case-by-case basis.<sup>163</sup> Specifically, Section 5 provides that “[t]he Commission is hereby empowered and directed to prevent persons . . . from using unfair methods of competition in or affecting commerce and unfair or deceptive acts or practices in or affecting commerce.”<sup>164</sup> This broad mandate in conjunction with the FTC’s special norms-setting duties<sup>165</sup> allows the FTC to respond to changing economic environments and to account for unique attributes of nuanced industries, like software development for the Internet.<sup>166</sup> With the passage of Section 5, Congress signaled faith in the FTC’s singular ability to navigate complicated or frontier antitrust matters—although both the FTC and DOJ have the authority to bring cases under Sherman and Clayton Acts, only the FTC can enforce Section 5.<sup>167</sup>

Congress intentionally designed the FTC and its authorities to help it appropriately define the contours of “unfair methods of competition” and “unfair or deceptive acts or practices.” Congress imbued the FTC rulemaking and adjudicatory authority, granting broad discretion to make rules with the force of law or challenge impermissible conduct where deemed appropriate.<sup>168</sup> This role was enhanced by the Commission’s design as a combination research, policy, and enforcement agency. It, in theory, enjoys the support of leading experts, originally in the field of economics but now increasingly in the fields of science and technology as well and is led by Commissioners who serve

---

163. *See id.* at 9–13 (1914); *see also* Comment of Federal Trade Commissioner Rohit Chopra, *supra* note 27, at 2 (“Generalist judges struggle to identify anticompetitive behavior and to apply complex economic criteria in consistent ways.” (footnotes omitted)); *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 917 (2007) (Breyer, J., dissenting) (“One cannot fairly expect judges and juries in such cases to apply complex economic criteria without making a considerable number of mistakes, which themselves may impose serious costs.” (citing HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE* 105 (2005); Bok, *supra* note 116, at 238–47)).

164. Federal Trade Commission Act § 5(a), 15 U.S.C. § 45(a)(2) (2018).

165. *See Zeisler, supra* note 161, at 272–73.

166. *See id.* at 273.

167. *See id.* at 272–75.

168. *See id.* at 272–73.

for seven years, which “give them an opportunity to acquire” the expertise needed to determine what constitutes a Section 5 violation.<sup>169</sup> The Commission maintains one of the most extensive consumer protection complaint databases,<sup>170</sup> crowdsourcing data to inform enforcement priorities from the very constituents competition law is intended to serve. When suspicious of a Section 5 violation, the FTC is granted “broader powers of investigation than almost any other department or agency in the federal government.”<sup>171</sup> In sum, the FTC is a unique regulatory body and has several tools at its disposal to carry out its charge.

Over the years, the FTC has interpreted Section 5 to establish two agency goals: protecting competitive structures and protecting consumers.<sup>172</sup> Today, the FTC is divided into three major bureaus: the Bureau of Competition, the Bureau of Consumer Protection, and the Bureau of Economics. The Bureau of Competition (BC) and Bureau of Consumer Protection (BCP) are the enforcement arms for the FTC’s corresponding dual statutory mandate, while the Bureau of Economics consists largely of economists who provide the analytical basis for the legal theories of its counterparts.<sup>173</sup> Both enforcement bureaus conduct investigations, consult experts, and make recommendations to the Commission as a whole regarding viable enforcement actions to pursue.<sup>174</sup> They are well suited to seize the opportunity of regulating API design to disallow overly restrictive APIs that contravene the goals of competition law.

---

169. S. REP. NO. 63-597, at 11 (1914); *id.* at 22 (“[W]e want trained experts; we want precedents; we want a body of administrative law built up.”).

170. See *FTC Releases Annual Summary of Complaints Reported by Consumers*, FED. TRADE COMMISSION (Mar. 1, 2018), <https://www.ftc.gov/news-events/press-releases/2018/03/ftc-releases-annual-summary-complaints-reported-consumers> (announcing that the FTC received over 2.5 million consumer complaints in 2017).

171. Robert Pitofsky, *Past, Present, and Future of Antitrust Enforcement at the Federal Trade Commission*, 72 U. CHI. L. REV. 209, 214 (2005) (footnote omitted); see also Federal Trade Commission Act §§ 9, 20, 15 U.S.C. §§ 49, 57b-1 (2018) (setting out the Commission’s investigatory powers).

172. See *About the FTC*, FED. TRADE COMMISSION, <https://www.ftc.gov/about-ftc> (last visited Nov. 9, 2019).

173. See *Bureaus & Offices*, FED. TRADE COMMISSION, <https://www.ftc.gov/about-ftc/bureaus-offices> (last visited Nov. 17, 2019).

174. See *id.*

### A. Rulemaking v. Adjudication

Of the two enforcement tools the agency has been given—adjudication and rulemaking—adjudication is the only feasible avenue for effective regulation. Rulemaking authority refers to the Commission’s ability to “define with specificity” which acts or practices are unfair through formal or informal rules that have the force of law.<sup>175</sup> Although Congress technically handed the FTC rulemaking power in connection with Section 5 enforcement, it has since made rulemaking, whether for promoting permissive APIs or otherwise, essentially impracticable. Congress has limited, by statute, the industries and activities about which the FTC is permitted to pass rules<sup>176</sup> and imposed requirements above and beyond those in the Administrative Procedures Act (APA).<sup>177</sup> Even without rulemaking in its toolkit, the FTC can still rely on adjudicative proceedings to address overly restrictive API designs that it suspects violate principles of competition law and consumer protection.

The Commission adjudicates cases involving competition harm and cases involving consumer protection,<sup>178</sup> and API regulation can comfortably fit within each of the available enforcement avenues. First, restrictive APIs are especially pernicious examples of incipient anticompetitive behavior that often fall out of the reach of Sherman and

---

175. Federal Trade Commission Act § 18, 15 U.S.C. § 57a(a)(1)(B) (2018).

176. See Federal Trade Commission Act § 5(a), 15 U.S.C. § 45(a)(2) (2018).

177. See David J. Bender, *Tipping the Scales: Judicial Encouragement of a Legislative Answer to FTC Authority over Corporate Data-Security Practices*, 81 GEO. WASH. L. REV. 1665, 1671 (2013). Today, most agencies engage in informal rather than formal rulemaking, which has fewer requirements. Agencies must give notice to the public of their rulemaking intent, including the general contours of the rule, as well as provide the opportunity for the public to comment on the form of the rule. See Administrative Procedure Act § 4(a)–(b), 5 U.S.C. § 553(b)–(c) (2018). However, in addition to complying with the APA, Congress requires the FTC to publish “with particularity the text of the [proposed] rule, including any alternatives,” and offer an informal hearing where stakeholders can challenge the proposed rule and cross-examine Commission witnesses. Federal Trade Commission Act § 18, 15 U.S.C. § 57a(b)(1), (c) (2018).

178. *A Brief Overview of the Federal Trade Commission’s Investigative, Law Enforcement, and Rulemaking Authority*, FED. TRADE COMMISSION [hereinafter *A Brief Overview of FTC Authority*] <https://www.ftc.gov/about-ftc/what-we-do/enforcement-authority> (last revised Oct. 2019).



Clayton challenges due to their nascence. There is already precedence for Section 5 activity in this space with the cases brought against Silicon Graphics and Intel challenging their breaks in technological interoperability.<sup>179</sup> Second, the FTC has already relied on novel consumer protection theories to bring privacy cases, arguing that insufficient data security violates accepted norms and consumer expectations.<sup>180</sup> Competition harm and consumer protection cases are distinguished based on the identity of the victim—whether the challenged activity predominantly injures competitors or end-users.<sup>181</sup> But the Agency and courts have acknowledged that the line between the two has blurred in modern cases, both because of a renewed legislative emphasis on consumer interests<sup>182</sup> and the recognition that the impact on competitors can be transferred downstream to directly injure consumers.<sup>183</sup>

Although FTC adjudication under novel theories was previously met with disdain from Congress and the courts, recent cases suggest a slightly heightened level of deference awarded to agency findings. Congress responded to periods of substantial FTC activity in consumer harm cases with restrictive action, limiting the Commission's ability to

---

179. See *In re Silicon Graphics, Inc.*, 120 F.T.C. 928, 928–39 (1995), 1995 WL 17012686; Complaint at 4, *In re Intel Corp.*, F.T.C. No. 061-0247 (Dec. 9, 2009) (No. 9341), 2009 WL 4999728, at \*4.

180. See *infra* Section IV.D.

181. See Advertising of Ophthalmic Goods and Services, 43 Fed. Reg. 23992, 24003 (June 2, 1978) (to be codified at 16 C.F.R. pt. 456); see also Julie Brill, *Competition and Consumer Protection: Strange Bedfellows or Best Friends?*, 10 ANTITRUST SOURCE, Dec. 2010, at 1, [https://www.ftc.gov/sites/default/files/documents/public\\_statements/competition-and-consumer-protection-strange-bedfellows-or-best-friends/1012abamasternewsletter.pdf](https://www.ftc.gov/sites/default/files/documents/public_statements/competition-and-consumer-protection-strange-bedfellows-or-best-friends/1012abamasternewsletter.pdf).

182. The Supreme Court expressed that Section 5 was intended to make direct consumer interests as important a factor as interests of competitors in determining the extent of the FTC's powers. See *FTC v. Sperry & Hutchinson Co.*, 405 U.S. 233, 244 (1972) (“The House Report on the amendment summarized congressional thinking: ‘(T)his amendment makes the consumer, who may be injured by an unfair trade practice, of equal concern, before the law, with the merchant or manufacturer injured by the unfair methods of a dishonest competitor.’” (citing H.R. REP. NO. 75-1613, at 3 (1937); S. REP. NO. 1705, at 2–3 (1936))).

183. See Brill, *supra* note 181, at 1–2, 5–7.

interpret its broad mandate.<sup>184</sup> Similarly, the Commission experienced appellate rebuke over a series of cases signaling a lack of deference given to the agency's conclusions.<sup>185</sup> Since *Chevron*, however, courts have shown the FTC a slightly enhanced level of deference regarding its decision-making.<sup>186</sup> In the first judicial review of a Section 5 action since *Chevron*, the court was unable to review the question of deference given the suit's posture,<sup>187</sup> but in a Sherman-based FTC suit, the Supreme Court did acknowledge deference owed to the Commission's finding of fact in language that was not cabined to just Section 1 and 2 claims.<sup>188</sup> However, most lower courts still don't give the FTC interpretations of Section 5 *Chevron* deference, using language that alludes to a lower *Skidmore/Seminole Rock* standard of deference.<sup>189</sup> Either way, the FTC's actions to encourage business behavior are practically

---

184. The Commission first issued the Unfairness Policy Statement in 1980 and later made it binding precedent by appending it to the International Harvester decision. Fed. Trade Comm'n, FTC Policy Statement on Unfairness (Dec. 17, 1980) [hereinafter FTC Policy Statement on Unfairness], <https://www.ftc.gov/public-statements/1980/12/ftc-policy-statement-unfairness>. Congress eventually codified the Unfairness Policy Statement with the 1994 FTC Reauthorization Act. Federal Trade Commission Act § 5, 15 U.S.C. § 45(n) (2018); see also Letter from James C. Miller III, Chairman, Fed. Trade Comm'n, to Rep. John D. Dingell, Chairman, H. Comm. On Energy & Commerce (Oct. 14, 1983), [https://www.ftc.gov/system/files/documents/public\\_statements/410531/831014deceptionstmt.pdf](https://www.ftc.gov/system/files/documents/public_statements/410531/831014deceptionstmt.pdf). The Commission also issued a statement on advertising substantiation in Thompson Medical. Fed. Trade Comm'n, FTC Policy Statement Regarding Advertising Substantiation (Nov. 23, 1984), <https://www.ftc.gov/public-statements/1983/03/ftc-policy-statement-regarding-advertising-substantiation>.

185. See *E.I. DuPont de Nemours & Co. v. FTC*, 729 F.2d 128, 135–36 (2d Cir. 1984); *Official Airline Guides, Inc. v. FTC*, 630 F.2d 920, 927 (2d Cir. 1980); *Boise Cascade Corp. v. FTC*, 637 F.2d 573, 581 (9th Cir. 1980) (“The policies calling for deference to the Commission are, of course, in tension with the acknowledged responsibility of the courts to interpret section 5.” (citing *FTC v. Beechnut Packing Co.*, 257 U.S. 441, 453 (1922); *Ger-Ro-Mar, Inc. v. FTC*, 518 F.2d 33, 38 (2d Cir. 1975))).

186. See *Mainstream Mktg. Servs., Inc. v. FTC*, 358 F.3d 1228, 1250 (10th Cir. 2004).

187. *FTC v. Abbott Labs.*, 853 F. Supp. 526, 536 (D.D.C. 1994).

188. *FTC v. Ind. Fed'n of Dentists*, 476 U.S. 447, 454 (1986).

189. *LabMD, Inc. v. FTC (LabMD III)*, 894 F.3d 1221, 1224, 1227 (11th Cir. 2018) (vacating an FTC order on the grounds of unenforceability) (“We review the FTC's legal conclusions *de novo* but give ‘some deference to [its] informed judgment that a particular commercial practice is to be condemned as “unfair.”’” (citing *Ind. Fed'n of Dentists*, 476 U.S. at 454) (alteration in original)).

immune, as seen in the Commission's ability to motivate Google to alter its search result practices by conducting a full investigation but never filing a formal complaint.<sup>190</sup>

### B. *Unfair Methods of Competition*

Practices that smell of antitrust but do not pass muster under traditional antitrust law's stringent tests can fall within Section 5's competition purview as long as they violate the spirit and policies of traditional antitrust laws.<sup>191</sup> The FTC has consistently interpreted "unfair methods of competition" to "encompass[] not only those acts and practices that violate the Sherman or Clayton Act but also those that contravene the spirit of the antitrust laws and those that, if allowed to mature or complete, could violate the Sherman or Clayton Act."<sup>192</sup>

---

190. See *infra* note 217.

191. See Debbie Feinstein, *A Few Words About Section 5*, FED. TRADE COMMISSION (Mar. 13, 2015, 12:37 PM), <https://www.ftc.gov/news-events/blogs/competition-matters/2015/03/few-words-about-section-5>; see also *FTC v. Sperry & Hutchinson Co.*, 405 U.S. 233, 244 n.5 (1972) (articulating the three factors that the FTC balances in deciding to bring standalone Section 5 claims, or an "unfair methods of competition" claim for behavior that does not violate Sherman or Clayton: "(1) whether the practice, without necessarily having been previously considered unlawful, offends public policy as it has been established by statutes, the common law, or otherwise—whether, in other words, it is within at least the penumbra of some common-law, statutory, or other established concept of unfairness; (2) whether it is immoral, unethical, oppressive, or unscrupulous; (3) whether it causes substantial injury to consumers (or competitors or other businessmen)"); *FTC v. Motion Picture Advert. Serv. Co.*, 344 U.S. 392, 394–95 (1953) ("The 'Unfair methods of competition', which are condemned by [§] 5(a) of the Act, are not confined to those that were illegal at common law or that were condemned by the Sherman Act. Congress advisedly left the concept flexible to be defined with particularity by the myriad of cases from the field of business. It is also clear that the Federal Trade Commission Act was designed to supplement and bolster the Sherman Act and the Clayton Act—to stop in their incipiency acts and practices which, when full blown, would violate those Acts, as well as to condemn as 'unfair method of competition' existing violations of them." (citations omitted)).

192. I STEPHANIE W. KANWIT, FEDERAL TRADE COMMISSION § 5:9 (2019) (internal quotations omitted); Joshua G. Hazan, *Stop Being Evil: A Proposal for Unbiased Google Search*, 111 MICH. L. REV. 789, 801 (2013) ("[T]he FTC has demonstrated a willingness to assert its § 5 mandate beyond conduct traditionally encompassed by the Sherman Act." (citing Daniel Crane, *Reflections on Section 5 of*

This permits the FTC to bring actions against companies for beginning courses of action that have not yet manifested in *substantial* harm to competition, which can encompass the various theories of harm discussed earlier in Section II(c)(ii) that did not violate the letter of the law, but might be likely to mature into an outright violation. Incipient harm is a theory of enforcement that relies on the penumbras of anti-trust law to halt anticompetitive practices and monopolies in their formative stages.<sup>193</sup>

---

*the FTC Act and the FTC's Case Against Intel*, 2 COMPETITION POL'Y INT'L ANTITRUST CHRON., Feb. 2010, at 2)); see also Crane, *supra*, at 2, 3 ("The Commission's powers under Section 5 are at least co-extensive with the substantive reach of the Sherman Act . . . . But the Supreme Court has also held that the FTC may go further than the Sherman Act and 'stop in their incipiency acts and practices which, when full blown, would violate those Acts.'" (quoting *FTC v. Brown Shoe Co.*, 384 U.S. 316, 322 (1966))).

193. See 1 KANWIT, *supra* note 192, § 3:3. The legislative history contains many references to the FTC's function to arrest incipient restraints. See 51 CONG. REC. 14941 (1914) (statement of Rep. Stevens); 51 CONG. REC. 13118 (1914) (statement of Sen. Reed). However, the FTC has suggested a hesitancy to undertake fringe cases that cannot demonstrate cognizable economic inefficiency. The framework the FTC has set forth to guide its action under the "unfair methods of competition" prong of Section 5 is: (1) the FTC "will be guided by the public policy underlying the anti-trust laws, namely, the promotion of consumer welfare"; (2) "the act or practice will be evaluated under a framework similar to the rule of reason, that is, an act or practice challenged by the Commission must cause, or be likely to cause, harm to competition or the competitive process, taking into account any associated cognizable efficiencies and business justifications"; and (3) the FTC "is less likely to challenge an act or practice as an unfair method of competition on a standalone basis if enforcement of the Sherman or Clayton Act is sufficient to address the competitive harm arising from the act or practice." Statement of Enforcement Principles Regarding "Unfair Methods of Competition" Under Section 5 of the FTC Act, 80 Fed. Reg. 57055, 57056 (Sept. 21, 2015). In making these statements, the FTC communicated its intention to restrict Section 5 enforcement actions to cases that meet the familiar "rule of reason" standard and to not challenge activities that do not have a detectable negative impact on consumer welfare, which the Chicago School interprets as a decrease in total welfare. See *supra* note 110 and accompanying text. This means that the FTC is unlikely to pursue restrictive API cases unless they find evidence that the impact on interoperability is resulting in true, measurable, economic inefficiency. Finally, the statements also suggest the agency will not bring claims that almost meet the elements of Section 5 but fall short because it interprets Sherman and Clayton filling the field of traditional antitrust. See Lindsey M. Edwards, Comment, *Does the Federal Trade Commission's Section 5 Statement Impose Limits on the Commission's Unfair Methods of Competition Authority?*, 13 J.L. ECON. & POL'Y 243, 255–57 (2017).

Accordingly, the Agency brings enforcement actions under Section 5 that do not amount to Section 1 or 2 violations, using theories of invitations to collude and breach of agreements to disclose information critical to meeting an industry standard. Both theories constitute incipient instances of anticompetitive behavior that the FTC acts to restrict early on for their clear potential to injure the marketplace. Invitations to collude invoke many of the same theories of harm relevant to horizontal mergers but encompasses a greater range of transactions that are not merger specific. Failure to disclose information related to compliance with an industry standard appears similar to theories of harm found in vertical mergers, namely the flexing of market dominance by one company in denying competitors the opportunity to achieve interoperability with its product. These precedents suggest that the FTC may be able to bring actions against API redesigns that either act as collusive collaborations among competitors to the exclusion of others or as the unfair exertion of dominant influence by one player against others that relied on said APIs to achieve previously agreed upon interoperability standards.

The FTC has challenged invitations to collude in shared monopolies not only when parties collaborate but also when they act in concert.<sup>194</sup> In shared monopoly enforcement cases, the Commission did not require each player to possess a dominant market share (relevant under a Section 1 claim) or the existence of an agreement (relevant to a Section 2 claim) in challenging the unilateral action.<sup>195</sup> Instead, the

---

194. See Richard Dagen, *Rambus, Innovation Efficiency, and Section 5 of the FTC Act*, 90 B.U. L. REV. 1479, 1511–16 (2010); see also William Kovacic, Chairman, Fed. Trade Comm'n, Opening Remarks at the Workshop on Section 5 of the FTC Act as a Competition Statute 17–18 (Oct. 17, 2008) (transcript available at [https://www.ftc.gov/sites/default/files/documents/public\\_events/section-5-ftc-act-competition-statute/transcript.pdf](https://www.ftc.gov/sites/default/files/documents/public_events/section-5-ftc-act-competition-statute/transcript.pdf)).

195. See *In re U-Haul Int'l, Inc.*, 150 F.T.C. 1 (2010), 2010 WL 9549977 at \*27–28; *In re Valassis Comm'ns, Inc.*, 141 F.T.C. 247 (2006), 2006 WL 6679058 at \*8–9; *In re Stone Container Corp.*, 125 F.T.C. 853 (1998), 1998 WL 34077377 at \*1–4; *In re Precision Moulding Co.*, 122 F.T.C. 104, 104–106 (1996); *In re YKK (U.S.A.) Inc.*, 116 F.T.C. 628, 628–30 (1993); *In re AE Clevite, Inc.*, 116 F.T.C. 389, 390–92 (1993); *In re Quality Trailer Prods. Corp.*, 115 F.T.C. 944, 944–46 (1992).

FTC asks whether “the practice in question unfairly burdened competition for a not insignificant volume of commerce.”<sup>196</sup> For example, the FTC’s complaint in the 2000 *Sony* Section 5 enforcement action focused primarily on the collective shares of the five players alleged of passive collusion—which amounted to 85 percent of the total market—and whether the concurrent behavior had the “same practical effect” as a minimum price agreement.<sup>197</sup> Similarly, eBay and Amazon comprise the vast majority of the domestic e-commerce marketplace, a shared monopoly.<sup>198</sup> So, if they conditioned access to their APIs on receiving high commission rates, the FTC can argue that the platforms are restricting competition in a shared monopoly scheme, whether they overtly colluded or simply acted in parallel.

---

196. *FTC v. Texaco, Inc.*, 393 U.S. 223, 230–31 (1968) (holding that Texaco’s 30,000 service stations involved, which amounted to 16.5% of all service stations in the United States, did not amount to an “insignificant” volume of commerce). In *FTC v. Motion Picture Advertising Service Co.*, the Supreme Court found a firm in violation of Section 5 for engaging in exclusive screening agreements with theatre owners in a manner that did not explicitly invite competitors to engage in similar agreements but left the opportunity open and seemed to incentivize cooperation. *FTC v. Motion Picture Advert. Serv. Co.*, 344 U.S. 392, 393–95 (1953).

197. Complaint at ¶¶ 2, 6–10, *In re Sony Music Entm’t, Inc.*, No. 971-0070 (F.T.C. Sept. 6, 2000), <https://www.ftc.gov/sites/default/files/documents/cases/2000/09/sonycomp.htm>; see also Statement of Chairman Robert Pitofsky and Commissioners Sheila F. Anthony, Mozelle W. Thompson, Orson Swindle, and Thomas B. Leary, *In re Sony Music Entm’t, Inc.*, No. 971-0070 (F.T.C. Sept. 6, 2000), <https://www.ftc.gov/public-statements/2000/09/statement-chairman-robert-pitofsky-commissioners-sheila-f-anthony-mozelle> (“[The Commission] will henceforth consider unlawful arrangements that have the same practical effect [as a minimum resale price maintenance agreement] without a detailed market analysis, even if adopted by a manufacturer that lacks substantial market power.”).

198. See *Amazon, eBay Still Dominate E-commerce Sales*, STOREBRANDS (Feb. 19, 2019), <https://storebrands.com/amazon-ebay-still-dominate-e-commerce-sales/>; Fareeha Ali, *Infographic: What are the Top Online Marketplaces?*, DIGITAL COM. 360 (July 2, 2019), <https://www.digitalcommerce360.com/article/infographic-top-online-marketplaces/>.

Invitation to collude cases can also extend to business decisions by market dominant players to share high value information with a limited group of competitors.<sup>199</sup> Exclusive access to confidential business information does not amount to exclusive dealings but does provide incredible competitive advantage to recipients that other players cannot bargain for in the marketplace, amounting to anticompetitive unilateral action.<sup>200</sup> In the context of Internet businesses, companies with closed APIs can decide to interact with other large market players only, similarly denying the opportunity for smaller or newer members to the market to negotiate entry into the collaboration. Recently, *The New York Times* discovered that Facebook, a dominant market player but not a monopoly, gave Spotify, Microsoft, Amazon, and others exclusive access to user data through restrictive APIs, permitting these hand-selected companies to benefit from its sensitive business intelligence to the detriment of their competitors.<sup>201</sup>

The FTC has also challenged refusals by dominant players to abide by information-sharing agreements that foster interoperability. These cases are premised on the existence of standard-setting organizations (SSOs) and the protection of the information in question by a patent or other form of intellectual property right.<sup>202</sup> SSOs are procompetitive entities that create structured, mutually beneficial relationships

---

199. The first cases involved allegations that the National Association of Music Merchants (“NAMM”) violated Section 5 by “arranging and encouraging the exchange among its members of competitively sensitive information that had the purpose, tendency, and capacity to facilitate price coordination and collusion among competitors.” Analysis of Agreement Containing Consent Order to Aid Public Comment at 1, *In re Nat’l Assoc. of Music Merchs., Inc.*, No. 001-0203 (F.T.C. Mar. 4, 2009), <https://www.ftc.gov/sites/default/files/documents/cases/2009/03/090304nam-manal.pdf>.

200. *See id.* at 2–4.

201. *See* Gabriel J.X. Dance et al., *As Facebook Raised a Privacy Wall, It Carved an Opening for Tech Giants*, N.Y. TIMES (Dec. 18, 2018), <https://www.nytimes.com/2018/12/18/technology/facebook-privacy.html>.

202. *In re Dell Comput. Corp.*, 121 F.T.C. 616, 617–18 (1996). Dell was a member of the Video Electronics Standards Association (“VESA”), a non-profit, standards-setting organization, representing virtually all major U.S. computer hardware and software manufacturers. *Id.* at 617. The standard in question was designed regarding graphics built for Dell computers. *Id.*

between interdependent businesses.<sup>203</sup> For instance, camera companies who would otherwise keep the mechanics of their products secret enter into contracts with competitors to generate and abide by certain design standards to ensure that all cameras are compatible with the film available on the market. It is usually in a company's best interest to protect trade secrets, but this is outweighed by the benefits of ensuring their product is compatible with as many complementary products on the market as possible.<sup>204</sup> SSOs allow consumers to buy Canon, Nikon, or Fujifilm cameras and use the same standard Kodak film with all of them, to the benefit of all competitors. Similar to proprietary film design, APIs also constitute intellectual property that companies tend to withhold but can share to their advantage. The same "procompetitive potential of standard-setting activities" exists for designing permissive APIs and building third party reliance on them, and these APIs certainly develop "a standard [that] may displace the normal give and take of competition."<sup>205</sup>

The FTC has the flexibility to expand its understanding of this claim to include refusals to disclose information without the existence of a formal agreement or patent, under theories akin to promissory estoppel or reliance interests built.<sup>206</sup> The diffuse nature of the Internet marketplace frustrates the ability to enter formal contracts or form

---

203. See U.S. DEPT OF JUSTICE & FED. TRADE COMMISSION, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 33-56 (2007), <https://www.ftc.gov/sites/default/files/documents/reports/antitrust-enforcement-and-intellectual-property-rights-promoting-innovation-and-competition-report.s.department-justice-and-federal-trade-commission/p040101promotinginnovationandcompetitionrpt0704.pdf>.

204. See James B. Speta, *Tying, Essential Facilities, and Network Externalities: A Comment on Piraino*, 93 NW. U. L. REV. 1277, 1280-81 (1999).

205. See Analysis of Proposed Consent Order to Aid Public Comment at 6, *In re Negotiated Data Sols.*, No. 051-0094 (F.T.C. Jan. 23, 2008), <https://www.ftc.gov/sites/default/files/documents/cases/2008/01/080122analysis.pdf>. The Commission noted that "the [Supreme] Court has not hesitated to impose antitrust liability on conduct that threatens to undermine the standard-setting process or to render it anticompetitive." *Id.*

206. See *id.* at 4-9; see also Mehra, *supra* note 109, at 938 ("In the FTC standard-setting cases, a common pattern emerges: private parties arrange to manage these unknowns, and the FTC tries to enforce these understandings in the face of post hoc opportunism." (citing *Rambus Inc. v. FTC*, 522 F.3d 456, 461 (D.C. Cir. 2008))).



SSOs.<sup>207</sup> However, the theory of harm underpinning these enforcement actions can extend to restrictive API redesigns that break interoperability between previously reliant third parties. In a case against Dell, the FTC focused on the harm of Dell's refusal to share information relied on by third parties when designing their products to be interoperable with Dell as well as the potential chilling effect Dell's actions could have on willingness to join SSOs.<sup>208</sup> Holding API creators to the representations they make implicitly through API design or explicitly in documentation would prevent them from renegeing after reaping the benefits of the representation. This may also act to deter designing APIs *ex ante* that are too permissive to maintain in the long term, avoiding the reliance interests before they attach.<sup>209</sup>

Finally, the FTC remains active in investigating anticompetitive behavior under theories akin to incipient tying,<sup>210</sup> even if these suits do not always result in formal administrative action. Often, dominant players condition the use of their API on agreements not to engage in certain practices that would be detrimental to the dominant player. Incipient tying, unlike complete bars to entry, does not make a program wholly unavailable but rather “impose[s] . . . incremental cost[s] on customers who use rival” products.<sup>211</sup> In *United States v. Microsoft*, the DOJ challenged the manner in which Microsoft used various methods to tie its middleware, Internet Explorer, to its operating system, Windows,<sup>212</sup> in an API redesign that “lacked any technical or business

---

207. See Mehra, *supra* note 109, at 946.

208. See *In re Dell Comput. Corp.*, 121 F.T.C. 616, 616–18 (1996).

209. See Mehra, *supra* note 109, at 945–48.

210. See *FTC v. Texaco, Inc.*, 393 U.S. 223, 230–31 (1968); *Atlantic Ref. Co. v. FTC*, 381 U.S. 357, 369–71 (1965); *Shell Oil Co. v. FTC*, 360 F.2d 470, 479–481 (5th Cir. 1966). The “TBA trilogy” refer to cases involving arrangements in the oil and gas industry in which arrangements were found anticompetitive even though they did not amount to coerced sales or transactions. See Arthur D. Austin, *The Tying Arrangement: A Critique and Some New Thoughts*, 1967 WIS. L. REV. 88, 90–93.

211. See Michael Katz & Carl Shapiro, *Antitrust in Software Markets*, in *COMPETITION, INNOVATION AND THE MICROSOFT MONOPOLY: ANTITRUST IN THE DIGITAL MARKETPLACE* 75 (Jeffery A. Eisenach & Thomas M. Lenard eds., 1999) (emphasis omitted); ANDREW I. GAVIL & HARRY FIRST, *THE MICROSOFT ANTITRUST CASES: COMPETITION POLICY FOR THE TWENTY-FIRST CENTURY* 315–18 (2014).

212. *United States v. Microsoft Corp.*, 253 F.3d 34, 47, 64–65 (D.C. Cir. 2001) (per curiam); Brief for Appellees United States and the State Plaintiffs at 21, *United*

justification.”<sup>213</sup> But Section 5 claims need not satisfy traditional anti-trust tests.<sup>214</sup> Indeed, the FTC brought a Section 5 claim against Intel under similar API interoperability theories, arguing that the company’s software redesign that made complementary products prefer its CPUs over others on the market was intended solely to reduce competition with no consumer benefit justification.<sup>215</sup>

This theory could extend to cases of restrictive APIs that condition access on agreement to an unrelated term, such as the use of or refusal to use a separate product. For example, Uber conditions the use of its API on an agreement from the user not to use the API for applications providing real time price comparisons with competitors—a condition that “deprive[s] the public of the advantages that flow from free competition.”<sup>216</sup> More recently, the FTC investigated Google’s potentially anticompetitive behavior, though no complaint was formally brought.<sup>217</sup> The investigation evinced a continued concern with the company using its market dominance to its own benefit.<sup>218</sup> Namely, Google allowed others to be listed in search results through an API but purportedly artificially curated the platform’s search results to benefit its own subsidiaries over organic results, practically tying successful

---

States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001) (Nos. 00-5212, 00-5213), 2001 WL 34129769 (“They therefore decided to make technical changes in Windows to ensure that removing IE from Windows is difficult and that . . . running any other browser is a jolting experience.” (internal quotations omitted)).

213. GAVIL & FIRST, *supra* note 211, at 317.

214. See Zeisler, *supra* note 161, at 274 (2014) (“The differences between the Clayton and FTC Acts reinforce that Congress intended the interpretation of section 5 to be independent of other antitrust terms.”).

215. Complaint at 3, *In re Intel Corp.*, No. 061-0247 (F.T.C. Dec. 16, 2009), <https://www.ftc.gov/sites/default/files/documents/cases/091216intelcmpt.pdf>.

216. See *N. Secs. Co. v. United States*, 193 U.S. 197, 332 (1904); *Terms of Use, UBER DEVELOPERS*, <https://developer.uber.com/docs/riders/terms-of-use> (last updated Aug. 2019); see also *How Uber Uses API Restrictions to Block Price Comparison and Impede Competition*, BEN EDELMAN (May 31, 2016), <http://www.benedelman.org/news-053116/>.

217. See *Google Agrees to Change Its Business Practices to Resolve FTC Competition Concerns in the Markets for Devices Like Smart Phones, Games and Tablets, and in Online Search*, FED. TRADE COMMISSION (Jan. 3, 2013), <https://www.ftc.gov/news-events/press-releases/2013/01/google-agrees-change-its-business-practices-resolve-ftc>.

218. See *id.*

use of the API with being financially tied to the company.<sup>219</sup> Additionally, Google conditioned the use of its AdWords API on the refusal to use third party products that allow consumers to manage multiple ad campaigns with AdWords competitors through one streamlined interface.<sup>220</sup> The inquiry considered the anticompetitive effects of these actions but primarily hinged on Google’s intent in API design—was its goal to injure competition or improve its platform for users?<sup>221</sup> Ultimately, the Commission was able to apply such substantial pressure that Google agreed to alter both practices with more permissive APIs.<sup>222</sup> The FTC can use its broad investigative powers to uncover these practices that would otherwise go unnoticed by most consumers and put pressure on the company to improve access without formally threatening enforcement.

### C. *Unfair or Deceptive Acts or Practices*

The FTC is tasked with regulating “unfair or deceptive acts or practices,” which authorizes it to challenge restrictive APIs that chill innovation and reduce consumer choice, implicating third party developers (parties using APIs to build complementary technology) and platform end-users (parties using APIs for their personal benefit) as relevant consumers. It has distilled this broad mandate as using its regulatory power to promote market efficiency and social goals by improving market operations.<sup>223</sup> In enforcing Section 5, the FTC can

---

219. *See id.*; *see also* Statement of the Federal Trade Commission Regarding Google’s Search Practices at 1–2, *In re Google Inc.*, No. 111-0163 (F.T.C. Jan. 3, 2013), [https://www.ftc.gov/system/files/documents/public\\_statements/295971/130103googlesearchstntofcomm.pdf](https://www.ftc.gov/system/files/documents/public_statements/295971/130103googlesearchstntofcomm.pdf).

220. *See Google Agrees to Change Its Business Practices to Resolve FTC Competition Concerns in the Markets for Devices Like Smart Phones, Games and Tablets, and in Online Search*, FED. TRADE COMMISSION (Jan. 3, 2013), <https://www.ftc.gov/news-events/press-releases/2013/01/google-agrees-change-its-business-practices-resolve-ftc>.

221. *See* Statement of the Federal Trade Commission Regarding Google’s Search Practices, *supra* note 219, at 2.

222. *See* Letter from David Drummond, Chief Legal Officer, Google Inc., to Jon Leibowitz, Chairman, Federal Trade Commission, at 2–3 (Dec. 27, 2012), [https://www.ftc.gov/system/files/documents/closing\\_letters/google-inc./130103googleletterchairmanleibowitz.pdf](https://www.ftc.gov/system/files/documents/closing_letters/google-inc./130103googleletterchairmanleibowitz.pdf).

223. *See* 1 KANWIT, *supra* note 192, § 4:1.

challenge practices that are either unfair *or* deceptive, oftentimes alleging both in complaints, as long as it can prove at least one theory of harm.<sup>224</sup> The animating feature of consumer protection suits is the intimate focus on individual consumer interests, not just aggregate economic welfare, as evidenced by the recent spree of data privacy cases brought by the FTC.<sup>225</sup>

Restrictive APIs fundamentally alter the product landscape in ways that the consumer may be unable to detect, potentially amounting to Section 5 deception.<sup>226</sup> A deception claim requires showing: (1) a representation, omission, or practice that misleads or is likely to mislead the consumer; (2) a consumer's interpretation of the representation, omission, or practice is considered reasonable under the circumstances; and (3) the misleading representation, omission, or practice is material.<sup>227</sup> In *FTC v. Wyndham*, the court held that the misrepresentation can be made in almost any context, including boilerplate policies, marketing materials, and even the design of websites or APIs, as long as it passes the above test.<sup>228</sup> This allows the FTC to challenge behav-

---

224. See *FTC v. Colgate-Palmolive Co.*, 380 U.S. 374, 384 (1965); *Simeon Mgmt. Corp. v. FTC*, 579 F.2d 1137, 1141 (9th Cir. 1978); *Federated Nationwide Wholesalers Serv. v. FTC*, 398 F.2d 253, 255 (2d Cir. 1968); *FTC v. Cantkier*, 767 F. Supp. 2d 147, 153 (D.D.C. 2011) (“Deception and unfairness, which are referenced separately in Section 5(a), provide two distinct rationales for FTC enforcement.” (citing *Am. Fin. Servs. Ass'n v. FTC.*, 767 F.2d 957, 979 n.27 (D.C. Cir. 1985); *In re Int'l Harvester Co.*, 104 F.T.C. 949, 1061 (1984))). As such, the FTC need not prove in a deception action that “the act or practice causes or is likely to cause substantial injury to consumers which is not reasonably avoidable by consumers themselves and not outweighed by countervailing benefits to consumers or to competition,” as required by 15 U.S.C. § 45(n) in an unfairness action. Federal Trade Commission Act § 5, 15 U.S.C. § 45(n) (2018); see *Cantkier*, 767 F. Supp. 2d at 152–53.

225. See *Solove & Hartzog*, *supra* note 29, at 638–40; see also *Internet Site Agrees to Settle FTC Charges of Deceptively Collecting Personal Information in Agency's First Internet Privacy Case*, FED. TRADE COMMISSION (Aug. 13, 1998), <https://www.ftc.gov/news-events/press-releases/1998/08/internet-site-agrees-settle-ftc-charges-deceptively-collecting> (announcing settlement of Agency's first internet privacy case, involving GeoCities' deceptive collection of personal information).

226. See Fed. Trade Comm'n, *FTC Policy Statement on Deception* (Oct. 14, 1983) [hereinafter *FTC Policy Statement on Deception*], [https://www.ftc.gov/system/files/documents/public\\_statements/410531/831014deceptionstmt.pdf](https://www.ftc.gov/system/files/documents/public_statements/410531/831014deceptionstmt.pdf).

227. See *id.*

228. 799 F.3d 236, 236–59 (3d Cir. 2015).

iors under a theory akin to promissory estoppel in contract law or voluntary undertaking in tort law because it believes companies renege on representations relied on by consumers can chill innovation. Consumers in the context of API design can consist of both the end-user that benefits from the interoperable product or the developers that consume the API as a service providing information for application development.

One of the biggest harms from a dominant player restricting its once permissive APIs is the impact it has on products whose success relied on interoperability with the dominant player's platform. Essentially, these scenarios involve representations by the dominant player that their API is accessible and reliable for product development purposes, which competitors then rely on in investing resources to develop interoperable products based on the API design. These representations can be written in API documentation, suggested by company policy,<sup>229</sup> or implied in the APIs permissive or open-source-library-reliant design. At some point, however, the dominant player redesigns their API to restrict access to core features or alters the terms of use for the API to impose prohibitive conditions, such as untenable use rates.<sup>230</sup> Because intent to deceive is not an element of this offense, the API operator cannot justify deception by arguing that they did not mean to deceive API-users,<sup>231</sup> but rather that circumstances had changed since

---

229. See *Developer Agreement and Policy*, TWITTER (May 25, 2018), <https://developer.twitter.com/en/developer-terms/agreement-and-policy.html>.

230. For example, Google Maps capitalized on its dominance in the geolocation market by raising the prices on companies who utilize its map services. See *supra* notes 74–76 and accompanying text.

231. See *FTC v. Algoma Lumber Co.*, 291 U.S. 67, 79–80 (1934); *FTC v. Lead-Click Media, LLC*, 838 F.3d 158, 168 (2d Cir. 2016) (“The deception need not be made with intent to deceive . . . .” (quoting *FTC v. Verity Int’l, Ltd.*, 443 F.3d 48, 63 (2d Cir. 2006))); *Montgomery Ward & Co. v. FTC*, 379 F.2d 666, 670 (7th Cir. 1967) (“Wards has misread the complaint to charge it with intentionally false advertising. The charge was deceptive advertising, and whatever Wards' intentions were in the advertising, they are not controlling in the determination of its deceptiveness.”); *Gimbel Bros. v. FTC*, 116 F.2d 578, 570 (2d Cir. 1941) (“Whether or not the advertiser knows the representations to be false, the deception of purchasers and the diversion of trade from competitors is the same. The purpose of the statute is protection of the public, not punishment of a wrongdoer.” (citing *FTC v. Klesner*, 280 U.S. 19, 27 (1929); *Royal Baking Powder Co. v. FTC*, 281 F. 744, 752 (2d Cir. 1922))).

they made their original representation. In short, deception is assessed from the perspective of the API user.<sup>232</sup>

End-users of either the dominant platform or the third-party applications built off of APIs provided by the dominant platform are also directly impacted by API changes, albeit more subtly. These end-users are deceived by abrupt and substantial changes to APIs because, due to “the nature of software products, breaks in interoperability may occur without users ever being aware that they are dealing with a new version of the product.”<sup>233</sup> This is less about an affirmative representation made by the dominant player but rather an omission or a failure to disclose material facts or conditions.<sup>234</sup> The FTC has interpreted the “materiality” requirement to mean a representation which is likely to affect consumer choice about the product.<sup>235</sup> Changes in the fundamental nature of a product should be seen as *per se* material in the context of software because traditional physical product based assumptions that consumers can detect these changes do not apply.<sup>236</sup> Users are unable to exercise consumer choice without necessary information about the product marketplace and, thus, cannot assert their preferences by continuing to use a product despite a change or switching to another product in response to changes.<sup>237</sup> Additionally, the fact that API redesigns, unlike physical product developments, change the single “instance” of

---

232. See FTC Policy Statement on Deception, *supra* note 226.

233. Arsdale & Venzke, *supra* note 39, at 245.

234. See *J. B. Williams Co. v. FTC*, 381 F.2d 884, 889 (6th Cir. 1967); *Feil v. FTC*, 285 F.2d 879, 900–02 (9th Cir. 1960); see also Consent Order to Cease and Desist, *In re General Motors Corp.*, 3 Trade Reg. Rep. (CCH) ¶ 22010 (1983), 1983 WL 945425 (requiring arbitration process for failure to disclose defects).

235. See FTC Policy Statement on Deception, *supra* note 226 (“The basic question is whether the act or practice is likely to affect the consumer's conduct or decision with regard to a product or service.”).

236. See Arsdale & Venzke, *supra* note 39, at 260, 275–76.

237. See *id.* at 275–76. In *Berkey Photo, Inc. v. Eastman Kodak Co.*, for example, the Second Circuit expressly dismissed a predatory innovation cause of action where the market had accepted the new product. 603 F.2d 263, 287–88 (2d Cir. 1979). The court in *Abbot Laboratories v. Teva Pharmaceuticals USA, Inc.* similarly noted that where consumers are free to make an informed choice among products, the court must defer to the market. 432 F. Supp. 2d 408, 421–22 (D. Del. 2006).

code, replacing the old API product with a new one,<sup>238</sup> means that consumers cannot access “old versions” of the product elsewhere.<sup>239</sup> Individuals who preferred the Instagram version that allowed them to post their filtered photos to their Twitter feed directly cannot access that deprecated version. As seen with more savvy developers that responded to API redesigns by refusing to support the dominant platform anymore,<sup>240</sup> this ability to express sentiment by consumer choice is critical to a functioning marketplace.<sup>241</sup>

In addition to deception, the FTC has broad authority to target unfair business practices.<sup>242</sup> A consumer unfairness claim requires establishing that a practice (1) “causes or is likely to cause substantial injury to consumers,” (2) “is not reasonably avoidable by consumers themselves,” and (3) is “not outweighed by countervailing benefits to consumers or to competition.”<sup>243</sup> When faced with this claim, courts

---

238. See Jill Lepore, *The Cobweb: Can the Internet Be Archived?*, NEW YORKER (Jan. 19, 2015), <http://www.newyorker.com/magazine/2015/01/26/cobweb> (“Web pages don’t have to be deliberately deleted to disappear. Sites hosted by corporations tend to die with their hosts. When MySpace, GeoCities, and Friendster were reconfigured or sold, millions of accounts vanished.”).

239. Cf. *id.* The *Berkey Photo* court noted that the availability of older products—and thus, consumer ability to choose—might be dispositive. See 603 F.2d at 287 n.39. It wrote: “[T]he situation might be completely different if, upon the introduction of the 110 system, Kodak had ceased producing film in the 126 size, thereby compelling camera purchasers to buy a Kodak 110 camera. . . . In such a case the technological desirability of the product change might bear on the question of monopolistic intent.” *Id.* (citing *Response of Carolina, Inc. v. Leasco Response, Inc.*, 537 F.2d 1307, 1330 (5th Cir. 1976)).

240. See *Developer Program Transition Guide*, HACKER NEWS, <https://news.ycombinator.com/item?id=9039028> (last visited Nov. 14, 2019) (displaying a conversation between developers frustrated with an API change and discussing boycotting the service.)

241. See *Abbott Lab’s*, 432 F. Supp. 2d at 421–22; see also Arsdale & Venzke, *supra* note 39, at 275 (2015) (“Users of a competitor’s product that pulls heavily from information accessed through the API of a dominant firm’s product may not have the opportunity to assess whether they prefer the dominant firm’s new product. Instead, consumers are forced to use the dominant firm’s product instead of the one they had been using, with no discernable change in the content or presentation that consumers consider when choosing which product to use.”).

242. See FTC Policy Statement on Unfairness, *supra* note 184.

243. Federal Trade Commission Act § 5, 15 U.S.C. § 45(n) (2018).

often apply either a “balancing of interests” test or a test akin to a conscience of the community test. The former challenges practices that violate cost-benefit inquiries,<sup>244</sup> and the latter challenges practices that, even if socially and economically desirable, are contrary to public values.<sup>245</sup> The community conscience test has been viewed by the Court as a value-laden, or efficiency-agnostic test, and has been a reality in antitrust law since before the introduction of the “unfair or deceptive acts or practice” language into Section 5 of the FTC Act in 1938.<sup>246</sup> Since then, Congress has reacted<sup>247</sup> to expansive application of this

---

244. See *In re Pfizer Inc.*, 81 F.T.C. 23, 1972 WL 127465 at \*29 n.13 (1972). The commission opinion, using a tort analogy, notes that “[r]easonableness is determined by a straightforward balancing of costs and benefits.” *Id.* (quoting George P. Fletcher, *Fairness and Utility in Tort Theory*, 85 HARV. L. REV. 537, 542 (1972)). The opinion further stated: “If the risk yields a net social utility (benefit), the victim is not entitled to recover from the risk-creator; if the risk yields a net social disutility (cost), the victim is entitled to recover.” *Id.* (quoting Fletcher, *supra*).

245. See *FTC v. Sperry & Hutchinson Co.*, 405 U.S. 233, 243–45 (1972) (“[L]egislative and judicial authorities alike convince us that the Federal Trade Commission does not arrogate excessive power to itself if, in measuring a practice against the elusive, but congressionally mandated standard of fairness, it, like a court of equity, considers public values beyond simply those enshrined in the letter or encompassed in the spirit of the antitrust laws.”); see also *FTC v. Standard Educ. Soc’y*, 86 F.2d 692, 696 (2d. Cir. 1936) (“The Commission has a wide latitude in such matters; its powers are not confined to such practices as would be unlawful before it acted; they are more than procedural; its duty in part at any rate, is to discover and make explicit those unexpressed standards of fair dealing which the conscience of the community may progressively develop.” (citing *FTC v. Raladam Co.*, 283 U.S. 643, 647–49 (1931); *FTC v. R.F. Keppel & Bro., Inc.*, 291 U.S. 304, 310–12 (1934))).

246. The Supreme Court held that sale by lottery to children was an *unfair method of competition* even though the respondents in that case argued that the selling practices did not “hinder competition or injure its competitors.” *R.F. Keppel & Bro., Inc.*, 291 U.S. at 308, 314. The authority to monitor “unfair or deceptive acts or practices” was first granted in 1938. Wheeler-Lea Act of 1938, Pub. L. No. 75-447, § 5(a), 52 Stat. 111, 112 (codified as amended at 15 U.S.C. § 45(a)(2) (2018)).

247. See S. Rep. No. 96-500 (1980), at 1–2 (1979), reprinted in 1980 U.S.C.C.A.N. 1102, 1103 (“In the recent past, the FTC has come under attack for embarking upon rulemaking proceedings which have aroused considerable criticism.”); see also *The FTC as National Nanny*, WASH. POST (Mar. 1, 1978), <https://www.washingtonpost.com/archive/politics/1978/03/01/the-ftc-as-national-nanny/69f778f5-8407-4df0-b0e9-7f1f8e826b3b/> (referring to the FTC as the “national nanny” after the Commission attempted to ban all advertising directed at children).



provision with legislation restricting rulemaking and guiding the interpretation of unfair practices.<sup>248</sup> Even so, the Commission has continued to recognize “the impossibility of drafting a complete list of unfair trade practices that would not quickly become outdated or leave loopholes for easy evasion.”<sup>249</sup>

The flexible definition of “unfair” allows the FTC to apply the unfairness doctrine to novel theories of harm, as long as the harm is “substantial.” Harm analysis for consumer unfairness weighs the gravity of the harm against the scope of its impact, meaning a practice can be found unfair if the magnitude of the injury is large even if its likelihood<sup>250</sup> or class of impacted victims is small or targeted.<sup>251</sup> For instance, changes to APIs can completely demolish the companies who have built platforms dependent on that API, which is a severe harm, even if the victim class impacted is small. Twitter’s API change took 143,000 applications offline, but other API changes may only impact a

---

248. See Federal Trade Commission Improvements Act of 1980, Pub. L. No. 96-252, 94 Stat. 374 (codified as amended in scattered sections of 15 U.S.C.). The FTC Improvements Act limited rulemaking authority by adding cumbersome procedural requirements. See Federal Trade Commission Improvements Act of 1980, Pub. L. No. 96-252, §§ 7–8, 94 Stat. at 376–77 (codified as amended at 15 U.S.C. § 57a (2018)). This led to the increased number of issues resolved case by case through adjudication. In 1994, Congress attempted to place some limits on the “unfairness” doctrine. The Federal Trade Commission Amendments Act of 1994 provides that the FTC shall have no authority under § 5 “to declare unlawful an act or practice on the grounds that such act or practice is unfair *unless the act or practice causes or is likely to cause substantial injury to consumers which is not reasonably avoidable by consumers themselves and not outweighed by countervailing benefits to consumers or to competition.*” Federal Trade Commission Act Amendments of 1994, Pub. L. No. 103-312, § 5, 108 Stat. 1691, 1695 (1994) (codified as amended at 15 U.S.C. § 45) (emphasis added). The change added a threshold of harm that must be met for the FTC to find a practice unfair. The act further states that “[i]n determining whether an act or practice is unfair, the Commission may consider established public policies as evidence to be considered with all other evidence. Such public policy considerations may not serve as a primary basis for such determination.” *Id.*

249. FTC Policy Statement on Unfairness, *supra* note 184 (citing H.R. Conf. Rep. No. 1142, 63d Cong., 2d Sess., at 19 (1914)).

250. See *In re LabMD, Inc.*, No. 9357, 2016 WL 4128215, at \*9 (F.T.C. July 28, 2016).

251. See *FTC v. Neovi, Inc.*, 604 F.3d 1150, 1157–58 (9th Cir. 2010); *FTC v. Direct Benefits Grp., LLC*, No. 6:11-cv-1186-Orl-28TBS, 2013 WL 3771322, at \*13 (M.D. Fla. July 18, 2013).

handful of third party developers.<sup>252</sup> Conversely, the manner in which restrictive APIs reduce consumer choice can qualify as consumer unfairness as a more subtle injury<sup>253</sup> that impacts a massive class of online users.<sup>254</sup> Instagram's decision to remove hashtag monitoring as a feature available through its API, completely for some and partially for others, without warning took several third party products built around providing hashtag tracking analytics for marketing purposes offline completely.<sup>255</sup>

Finally, a consumer unfairness analysis requires the harm to be one that consumers cannot reasonably avoid. Courts have interpreted this principle to mean instances when consumers do not have a free and informed choice that would enable them to avoid the unfair practice.<sup>256</sup> As the aforementioned examples demonstrate, the very nature of API

---

252. Mark Wyciślik-Wilson, *Twitter Removes 143,000 Apps, Now Requires Developers to Request API Access*, BETANEWS (Jul. 25, 2018), <https://betanews.com/2018/07/25/twitter-api-access-developer/>.

253. See Arsdale & Venzke, *supra* note 39, at 275–76. However, the harm need not be monetary to qualify as an injury, though that is often the easiest way to show impact. See *FTC v. Wyndham Worldwide Corp.*, 10 F. Supp. 3d 602, 622–24 (D.N.J. 2014) (accepting that allegations of financial injury resulting from fraud are sufficient to plead a substantial injury), *aff'd*, 799 F.3d 236 (3d Cir. 2015); see also *Am. Fin. Servs. Ass'n v. FTC*, 767 F.2d 957, 972 (D.C. Cir. 1985) (explaining that most substantial injury cases would include monetary harm); Lawrence J. Trautman & Peter C. Ormerod, *Corporate Directors' and Officers' Cybersecurity Standard of Care: The Yahoo Data Breach*, 66 AM. U. L. REV. 1231, 1236–38 (2017) (arguing that poor cybersecurity standards have been held to be unfair and deceptive practices even without a misrepresentation to consumers).

254. See Wyciślik-Wilson, *supra* note 252. Breaks in interoperability, like API redesigns, occur “for no purpose other than the exclusion of competition.” Arsdale & Venzke, *supra* note 39, at 245.

255. See Amanda Zantal-Wiener, *Instagram Has Limited (or Cut Off) API Data Available to Developers. Here's What That Means*, HUBSPOT (Apr. 3, 2018, 11:58 AM), <https://blog.hubspot.com/marketing/instagram-limits-api-data>.

256. See *Neovi*, 604 F.3d at 1158; *FTC v. J.K. Publ'ns, Inc.*, 99 F. Supp. 2d 1176, 1201 (C.D. Cal. 2000); *FTC v. Ideal Fin. Sols., Inc.*, No. 2:13-cv-00143-JAD-GWF, 2015 WL 4032103, at \*7 (D. Nev. June 30, 2015) (“An injury is reasonably avoidable if consumers ‘have reason to anticipate the impending harm and the means to avoid it,’ or if consumers were aware of, and are reasonably capable of pursuing, potential avenues toward mitigating the injury after the fact.” (quoting *Davis v. HSBC Bank Nevada, N.A.*, 691 F.3d 1152, 1168–69 (9th Cir. 2012))).

restrictions is the exertion of unilateral power to deny access to software-producing consumers and to limit options for software-using consumers.

*D. Privacy Cases—Where Competition Meets Consumer Harm*

The FTC can use the deception and unfairness prongs of Section 5's consumer protection mandate, individually and conjunctively, to protect Internet interoperability just as it has for consumer privacy.<sup>257</sup> Breaks in Internet interoperability that mislead consumers or injure their faith in the business or marketplace is detrimental to competition overall, both with privacy breaches and deceptive API redesigns. To date, the Commission has brought more than 60 cases alleging companies failed to implement reasonable safeguards to the imminent threat of hacking, as well as more than 50 general privacy cases.<sup>258</sup> These cases have exercised the FTC's institutional advantages in conducting regular studies, soliciting advice from researchers, and surveying the community to understand the norms of data security and to ascertain consumer expectations. They also show how considering competition harms and consumer harms in conjunction can extend Section 5 jurisdiction to rectify injurious industry practices and adapt to an evolving marketplace.

First, the Commission relied on the deceptive standard to target companies that had breached express assertions of data security in maintaining subpar systems protections.<sup>259</sup> Recall, in deception cases the FTC need not make a showing of substantial harm to consumers, merely that a material misrepresentation was made. In privacy cases, the representation is material when the court can assume that if consumers did not believe their information was secure then they would not have exercised the choice of transacting with that business. In *FTC*

---

257. See Tom Wheeler, *The FTC Should Match Tech Company Innovation with Oversight Innovation*, BROOKINGS (Dec. 12, 2018), <https://www.brookings.edu/blog/techtank/2018/12/12/the-ftc-should-match-tech-company-innovation-with-oversight-innovation/>.

258. FED. TRADE COMM'N, *supra* note 28, at 2–4.

259. See, e.g., Complaint at 2–4, *In re Petco Animal Supplies, Inc.*, No. 032-3221 (F.T.C. Mar. 4, 2005), <https://www.ftc.gov/sites/default/files/documents/cases/2005/03/050308comp0323221.pdf>.

*v. Wyndham*, the FTC sufficiently alleged that Wyndham made representations that it was using “commercially reasonable” strategies to secure consumer data, but then did not use encryption or firewalls, raising the possibility of a Section 5 violation.<sup>260</sup> Because these industry norms existed and were not cost prohibitive to implement, the decision not to was found to violate Section 5.<sup>261</sup>

Therefore, API documentation can also be deceptive if it promises to remain open and widely accessible, building user reliance, and then restricts access to the API abruptly. Developers would not have invested the time and energy to build applications using these APIs, exercising their choice as consumers, if they did not believe the representations. If a commercially reasonable *permissive* API design existed, the company’s imposition of a *restrictive* API could be found indefensible. For example, Twitter’s shift to restrictive APIs was felt by many in the developer community as a betrayal. Unlike Facebook, Twitter had made representations that it would remain an “open platform.”<sup>262</sup> Where once anyone could build off of Twitter’s platform by accessing the content its users generated as long as they also displayed the ads provided by Twitter’s advertising partners, the company now has placed hard limits on the amount of likes, tweets, retweets, etc. any developer can access within a given time frame.<sup>263</sup> These limits target third party apps that attempt to mimic Twitter’s core functionality, en-

---

260. See *FTC v. Wyndham Worldwide Corp.*, 10 F. Supp. 3d 602, 628–31 (D.N.J. 2014), *aff’d*, 799 F.3d 236 (3d Cir. 2015).

261. See *id.* at 622–23. The decision not to was found to violate Section 5 in district court. However, the decision may evolve on appeal.

262. See Popper, *supra* note 58 (“Mark Suster, a venture capital investor, sits on the board of DataSift, one of only two companies authorized to re-sell data from Twitter’s firehose, the full feed of more than 400 million tweets per day. ‘At the beginning, Twitter was happy to have anyone building on top of their data. That has changed, and if you didn’t see this coming, then you haven’t been paying attention. Twitter wants to be a media company, like Facebook, and it believes the best way to do that is to tightly control when and where people can access its content.’”).

263. See Roth & Johnson, *supra* note 18. On September 10, 2018, new default rate limits were introduced—“Tweets & Retweets (combined): 300 per 3 hours[:]; Likes: 1000 per 24 hours[:]; Follows: 1000 per 24 hours[:]; Direct Messages: 15,000 per 24 hours”—though increases to these rate limits might be granted on request. *Id.*

couraging users of these apps to migrate to the main Twitter platform.<sup>264</sup> This unexpected shift to a restrictive platform betrays a former representation, just as failure to implement baseline security measures betrays a promise to provide a secure platform.

Beyond deception, the Commission's use of just the unfairness prong in data privacy cases shows that companies can be held accountable for unfairly restrictive APIs, whether they promised to keep them open or not. Focusing on unfairness, rather than deception, courts balanced the soundness of an action or omission against the harm or potential harm to the consumer. In *FTC v. Wyndham*, the FTC alleged that Wyndham's practices were unfair because they "unreasonably and unnecessarily exposed consumer personal data to unauthorized access and theft."<sup>265</sup> The hotel chain tried to argue that it could not have treated consumers unfairly when it itself was victimized by a hack.<sup>266</sup> The court soundly rejected this argument, suggesting that behavior can be unfair when an actor fails to take precautions to harm in the face of likelihood of that harm.<sup>267</sup> This implies an affirmative duty to protect consumer data from third party hackers, even without having made representations to do so because it has become a consumer expectation in the marketplace. Similarly, one can argue that companies that "unreasonably and unnecessarily" alter APIs to restrict access to competitors may be behaving unfairly even if the decision is economically efficient because to do so would violate consumer expectations of open access. Because there are no "reasonable" situations to permit a hack, the bar to demonstrate patently "unreasonable" API restrictions would be substantially higher, but the door is left ajar to bring enforcement if such a case is found.

Privacy is a predominantly consumer-driven issue, but the Commission has brought enforcement action invoking consumer harm theories for predominantly competition-driven issues as well. In the enforcement action against Intel, the Commission raised a consumer protection claim alongside its competition harm claim, extending the

---

264. See Anthony Ha, *Twitter Handcuffs Client Apps with New API Changes*, TECHCRUNCH (Aug. 16, 2012, 6:31 PM), <http://techcrunch.com/2012/08/16/twitter-api-client-apps>.

265. *Wyndham Worldwide Corp.*, 10 F. Supp. 3d at 608.

266. *FTC v. Wyndham Worldwide Corp.*, 799 F.3d 236, 245 (3d Cir. 2015).

267. See *id.*

category of “consumer” to include smaller third party companies reliant on Intel’s chips, confirming that the agency was willing to view business-to-business activity as falling within the FTC province.<sup>268</sup> Additionally, two of its three recent cases involving breaches of agreements to disclose standard-relevant patent information also raised “unfair act or deceptive practices” claims as well.<sup>269</sup> In these suits, the Commission did not distinguish the elements for competition theory and consumer harm theory but rather focused on the overlapping anti-competitive outcomes.<sup>270</sup> It went so far as to imply that the three-factor test for consumer harm would capture all prohibited conduct under competition theories of Section 5 as well, but pointed out the added advantage that consumer protection theories do not have a market power threshold requirement to be brought. In *In re Negotiated Data Solutions LLC*, the FTC focused on the course of conduct that reflected anticompetitive motivations, without addressing negative market impact, and then raised the possibility that the conduct could raise consumer prices.<sup>271</sup> This suggests a general willingness to use the synergy between competition and consumer protection theories of harm to address incipient anticompetitive behavior through Section 5 actions.

---

268. See Complaint at 2–5, *In re Intel Corp.*, No. 061-0247 (F.T.C. Dec. 16, 2009), <https://www.ftc.gov/sites/default/files/documents/cases/091216intelcmpt.pdf>.

269. See Complaint at 5–7, *In re Negotiated Data Solutions LLC*, No. 0510-094 (F.T.C. Sept. 22, 2008), <https://www.ftc.gov/sites/default/files/documents/cases/2008/09/080923ndscomplaint.pdf>; Complaint at 5–6, *In re Motorola Mobility LLC & Google Inc.*, No. 121-0120 (F.T.C. July 23, 2013), <https://www.ftc.gov/sites/default/files/documents/cases/2013/07/130724google-motorolacmpt.pdf>.

270. See Complaint at 6–7, *In re Negotiated Data Solutions LLC*, No. 0510-094 (Sept. 22, 2008), <https://www.ftc.gov/sites/default/files/documents/cases/2008/09/080923ndscomplaint.pdf>; Complaint at 5–6, *In re Motorola Mobility LLC & Google Inc.*, No. 121-0120 (F.T.C. July 23, 2013), <https://www.ftc.gov/sites/default/files/documents/cases/2013/07/130724google-motorolacmpt.pdf>.

271. See Complaint at 6–7, *In re Negotiated Data Solutions LLC*, No. 0510-094 (Sept. 22, 2008), <https://www.ftc.gov/sites/default/files/documents/cases/2008/09/080923ndscomplaint.pdf>.

*E. Proactive Remedies*

The FTC can play a powerful role as a norm-setting body in the government, defining evidence-backed standards to promote competition and protect consumer welfare through investigations into business practices and consent decrees, without resorting to lengthy and expensive litigation. The Commission is well positioned to counter the potentially anticompetitive instincts of a concentrated Internet marketplace using its remedial toolkit without causing harm to business or chilling the marketplace. Data security enforcement examples serve as a strong example of the manner in which initiating Section 5 proceedings can: (1) notify parties of potentially anticompetitive behavior,<sup>272</sup> (2) negotiate a proactive plan to mitigate the risk of harm,<sup>273</sup> and (3) signal to the remaining players in the market the principles underlying the enforcement action.<sup>274</sup>

First, the FTC can act to halt API redesigns before they ossify into new code through cease and desist orders, avoiding the problem of “scrambling the egg” in the first place while the potentially anticompetitive practice is investigated.<sup>275</sup> These orders can be seen as the administrative agency equivalent of an injunction, and the agency can seek civil penalties and injunctions for violations of these orders.<sup>276</sup> Then, the harm is rectified through consent decrees, or prescriptive

---

272. See Amanda Reeves, *Conduct-Specific Tests? How the Federal Trade Commission Can Reframe the Section 5 Debate*, CPI ANTITRUST J., Feb. 2010, at 4–8.

273. See Bender, *supra* note 177, at 1674–76.

274. See Reeves, *supra* note 272, at 7–8; Statement of Commissioner Brill, In Which Chairman Leibowitz and Commissioners Rosch and Ramirez Join at 1–2, *In re SettlementOne Credit Corp., In re ACRAnet Inc., In re Fajilan & Assocs.*, Nos. 082-3208, 098-3088, 092-3089 (F.T.C. Aug. 15, 2011), <https://www.ftc.gov/sites/default/files/documents/cases/2011/08/110819settlementonestatement.pdf>; see also Gerard M. Stegmaier & Wendell Bartnick, *Psychics, Russian Roulette, and Data Security: The FTC’s Hidden Data-Security Requirements*, 20 GEO. MASON L. REV. 673, 673–76 (2013).

275. Federal Trade Commission Act § 5, 15 U.S.C. § 45(b) (2018) (detailing the process and ability of the Commission to issue a cease-and-desist order).

276. *Id.* § 45(l), (m). Section 13(b) of the FTC Act does not require the FTC to show a likelihood of irreparable harm in order to obtain a preliminary injunction, so its ability to receive injunctive relief is broader than private litigants. See 1 KANWIT, *supra* note 192, § 10:4 n.4 (citing 15 U.S.C. § 53(b) (2018)) (discussing the court’s discretion in granting a preliminary injunction).

agreements setting forth strict conditions when the Commission has “reason to believe” that a company has violated Section 5 and the company wants to avoid litigation.<sup>277</sup> To ensure compliance, consent decrees generally require periodic internal audits and, in extreme cases, internal monitors to oversee implementation of the order’s conditions.<sup>278</sup> These aggregate orders begin to shape the contours of Section 5 violations and espouse foundational principles informing the enforcement actions, functioning much like common law doctrine.<sup>279</sup>

The process by which these decrees are finalized preserves public participation in norms setting, ameliorating the concern that courts are ill suited to adjudicate nuanced issues of technology and business. Some find these consent decrees unduly powerful, enabling the FTC to extract commitments from companies when they would not be able to win in litigation.<sup>280</sup> But consent decrees are not examples of unilateral agency rule but rather byproducts of a fairly open and collaborative process. The content of these consent decrees do not operate like Oz, hidden behind veils of ignorance. Rather, the decrees are made public and include a 30 day period for public comment before the order is finalized, allowing FTC constituents (the consumers and competitors in that market) to have a say in remedial measures.<sup>281</sup> Further, in establishing these norms, the FTC does not divine industry standards as the Oracle of Delphi but rather looks to consumer expectations and industry best practices.<sup>282</sup> Therefore, the FTC is less of a norm-setter than a norm-enforcer in cases when the market does not serve to enforce these norms itself.

---

277. See *A Brief Overview of FTC Authority*, *supra* note 178.

278. See FED. TRADE COMM’N, *supra* note 28, at 1 (“This includes, when appropriate, implementation of comprehensive privacy and security programs, biennial assessments by independent experts, monetary redress to consumers, disgorgement of ill-gotten gains, deletion of illegally obtained consumer information, and providing robust transparency and choice mechanisms to consumers.”).

279. Solove & Hartzog, *supra* note 29 (“[T]he FTC has created a body of common law doctrines . . .”).

280. See Douglas H. Ginsburg & Joshua D. Wright, *Antitrust Settlements: The Culture of Consent*, in 1 WILLIAM E. KOVACIC: AN ANTITRUST TRIBUTE 177, 177–190 (Nicolas Charbit et al. eds., 2013).

281. See *A Brief Overview of FTC Authority*, *supra* note 178.

282. See Solove & Hartzog, *supra* note 29, at 661 (2014) (explaining how industry standards and consumer expectations form the basis for substantive FTC standards).



Consent decrees are powerful examples of forward-looking remedies that can both neutralize a competition harm or consumer harm while also providing better guidance to future actors. They can also serve as exceptions to the principle that companies owe their competitors no duty of aid.<sup>283</sup> For example, the consent decree in the antitrust case against Microsoft, involving APIs and interoperability, set forth conditions that required Microsoft to undertake the cost and effort of developing more interoperable APIs and making documentation of their APIs publicly available to ensure that all competitors had fair opportunity to make their products compatible with the Microsoft operating system.<sup>284</sup> The consent decree went as far as to force specific business transactions, requiring Microsoft to license its intellectual property to firms developing interoperable technologies.<sup>285</sup> This imposed a cost on Microsoft to ensure that all programs could integrate with Windows in the same way that Microsoft's own products could.<sup>286</sup> Similar consent decrees can encourage internet businesses with comparable market dominance to Microsoft in the 90s to bear the cost of redesigning their APIs for improved interoperability.

However, FTC remedies are not without shortcomings. The Commission is effectively unable to ensure that adjudicative outcomes are accommodated by defendants and other market players because Section 5 does not provide for civil penalties as a first order tool.<sup>287</sup>

---

283. See William H. Page & Seldon J. Childers, *Software Development as an Antitrust Remedy: Lessons from the Enforcement of the Microsoft Communications Protocol Licensing Requirement*, 14 MICH. TELECOMM. & TECH. L. REV. 77, 83, 89–90 (2007) (describing these “forward-looking” provisions in the context of the *Microsoft* litigation).

284. Stipulation at 3–4, *United States v. Microsoft Corp.*, 252 F.3d 34 (D.D.C. 2001) (No. 98-1232 (CKK)), <https://www.justice.gov/atr/case-document/file/504111/download>.

285. *Id.*

286. See Hazan, *supra* note 192, at 807–08.

287. Civil penalties can be brought after an administrative case has been brought, a final order was issued, and the party was found in violation of the final order. Federal Trade Commission Act § 5, 15 U.S.C. §45(l), (m) (2018). And even then, the Commission must show that the violator had “actual knowledge that such act or practice is unfair or deceptive and is unlawful” under 15 U.S.C. § 45(a)(1). See *id.* § 45(m)(1)(A), (B). To prove “actual knowledge,” the Commission typically shows

This detracts from the Commission's ability to deter because enforcement of a consent decree requires bringing another resource-intensive suit challenging noncompliance. Moreover, a circuit recently challenged the agency's authority to include proscriptive requirements for information security in a data privacy challenge under Section 5, stating that a cease and desist order must demand a company to halt an ongoing activity but cannot preemptively require it to engage in activities prescribed by the FTC.<sup>288</sup> Aware of its own tenuous enforcement capabilities, the FTC specifically raised questions about the scope of its remedial authority during the recent 2018 hearings.<sup>289</sup>

## V. CONCLUSION

Harm from anticompetitive practices can occur in degrees, and activity that does not rise to the level of traditionally proscribed anti-trust behavior can still injure market innovation and consumers. The Internet is still fledgling and has yet to establish concrete norms, which provides a unique opportunity for a norm-building agency to engage with market players, using its unique procedural and structural advantages to help shape these norms in utility-maximizing ways. This is especially true for the regulation of API design in an Internet environment that is growing increasingly concentrated because marketplace conditions do not incentivize cooperation between a large number of diverse players. Rather, they incentivize increased market concentration through the redesign of APIs in more and more restrictive fashions. If the unification of the three largest online social media communication platforms seems concerning on its face, then there should be an avenue to investigate those suspicions further.

---

that it had provided the violator with a copy of the Commission determination in question, or a "synopsis" of that determination. *A Brief Overview of FTC Authority*, *supra* note 178. 15 U.S.C. 45 § 5(m)(1)(B) limits wrongdoers to only a "single bite of the apple" before they are subject to monetary penalties. *See* 1 KANWIT, *supra* note 192, § 10:7.

288. *See* *LabMD, Inc. v. FTC*, 894 F.3d 1221, 1236–38 (11th Cir. 2018) ("In the case at hand, the cease and desist order contains no prohibitions. It does not instruct LabMD to stop committing a specific act or practice. Rather, it commands LabMD to overhaul and replace its data-security program to meet an indeterminable standard of reasonableness. This command is unenforceable.").

289. *See* *Fed. Trade Comm'n*, *supra* note 27.

Not only is enforcement in this space normatively advisable, but it is also more politically feasible than ever before. The Facebook technical integration is widely seen as a snub to antitrust enforcement enthusiasm, and lawmakers seem willing to take the bait.<sup>290</sup> There have been calls specifically for FTC investigation of Facebook's data privacy practices and its proposed merger,<sup>291</sup> and the FTC has already levied the single largest fine in FTC history, \$5 billion, for Facebook's violation of a prior consent decree.<sup>292</sup> In the EU, Germany's competition regulator has already soundly rejected Facebook's platform integration proposal.<sup>293</sup> Both Congress's call for increased FTC action as well as Germany's order halting the platform merger are brought under the gambit of competition law frameworks and under a theory of harm alluding to consumer data privacy, invoking directly the two specific purviews of Section 5 enforcement.

Section 5 has experienced peaks and valleys in the extent to which Congress and courts accept its invocation, but recent years have shown narrow places where its use has been not only permitted but actually encouraged. The FTC can analogize from precedents in invitations to collude cases, breach of information sharing agreements, and incipient tying, as well as an expansion on theories of consumer harm into the privacy space, to justify more investigation in API designs. An informed FTC can then take due action when an API is so restrictive

---

290. See Kelly, *supra* note 136.

291. See Makena Kelly, *Democratic Leader Calls on FTC to Investigate Facebook's Market Power*, THE VERGE (Mar. 19, 2019, 11:37 AM), <https://www.theverge.com/2019/3/19/18272605/facebook-ftc-investigation-congress-republican-david-cicilline>; see also Tony Romm & Elizabeth Dwoskin, *Facebook, Google, and Other Tech Giants to Face Antitrust Investigation by House Lawmakers*, WASH. POST (June 3, 2019, 4:26 PM), <https://www.washingtonpost.com/technology/2019/06/03/facebook-google-other-tech-giants-face-antitrust-investigation-by-house-lawmakers/>.

292. Lesley Fair, *FTC's \$5 Billion Facebook Settlement: Record-breaking and History-making*, FED. TRADE COMM'N (July 24, 2019, 8:52 AM), <https://www.ftc.gov/news-events/blogs/business-blog/2019/07/ftcs-5-billion-facebook-settlement-record-breaking-history>.

293. See Hal Singer, *Germany's Competition Agency Cracks Down on Facebook: But Is Antitrust the Right Tool for the Job?*, FORBES (Mar. 18, 2019, 6:05 AM), <https://www.forbes.com/sites/washingtonbytes/2019/03/18/germanys-competition-agency-cracks-down-on-facebook-but-is-antitrust-the-right-tool-for-the-job/#16a3d7cf260e>.

that its potential harm to competition or consumers outweighs the company's purported business justification, even if the harm has not yet come to fruition. Addressing these incipient risks is especially critical on the Internet, where these kinds of activities can shift the course of Internet development irrevocably away from the more open, diverse experience we enjoy today.

At the end of the day, Section 5 adjudication cannot be the whole solution, or even most of the solution. Some Senators are making strides to address some elements of this vast, networked issue, though their efforts are still quite nascent.<sup>294</sup> But while we wait for the best solution, it cannot hurt to use what we have at our disposal now to stem the flow. After all, a Band-Aid solution is better than no solution at all.

---

294. See Press Release, Senator Mark R. Warner, Senators Introduce Bipartisan Bill to Encourage Competition in Social Media (Oct. 22, 2019), <https://www.warner.senate.gov/public/index.cfm/2019/10/senators-introduce-bipartisan-bill-to-encourage-competition-in-social-media> (presenting a bill to promote interoperability by requiring large social media companies to make their data portable to users).