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Competition, Privacy, and Big Data

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COMPETITION, PRIVACY, AND BIG DATA

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"We don't have better algorithms … we just have more data."[1]

"Big data now represents a core economic asset that can create significant competitive advantages for firms and drive innovation and growth."[2]

"Absent specific legal guidance, organizations—and people, in general—tend to act in their own best interests. The resulting behavior is destructive to individual privacy because it is driven by the never-ending pursuit of improved products and services in the context of competition."[3]

"Sharing people's data with potentially hundreds of companies, without properly assessing and addressing the risk of these counterparties, raises questions around the security and retention of this data."[4]

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[*] Senior Consultant, Charles River Associates. The views expressed in this article are the author's own. Steven VanOmmeren provided helpful comments on an earlier draft.

1 Scott Cleland, *Google's "Infringenovation" Secrets*, FORBES (Oct. 3, 2011), https://www.forbes.com/sites/scottcleland/2011/10/03/googles-infringenovation-secrets/#5df7725130a6 (quoting Google's Chief Scientist Peter Norvig).

2 OECD, *Supporting Investment in Knowledge Capital, Growth and Innovation* 319 (2013).

3 Eric Santanen, *The Value of Protecting Privacy*, 62 BUS. HORIZONS 5, 9 (2019).

4 Simon McDougall, *ICO Adtech Update Report Published Following Industry Engagement*, INFO. COMMISSIONER'S OFF. (June 20, 2019), https://ico.org.uk/about-the-ico/news-and-events/news-and-blogs/2019/06/blog-ico-adtech-update-report-published-following-industry-engagement/.

If, as the Google executive quoted above contends, having access to larger amounts of data than its rivals can enhance the competitive position of a firm, what should the public policy be toward the use by a firm of the data that it collects about its users? This question, which implicates issues of both privacy and competition, is the subject of this article. Specifically, the article is concerned with the control of data *about* the activities of large numbers of individuals by a single firm and the incentives, or lack thereof, of that firm to share those data with its rivals.[5]

There are many possible meanings of the term "privacy." For example, as Adam Cohen has observed, "People do a lot of things online that they may want to keep secret – for example, looking up symptoms of diseases (which health insurance companies may consider in writing coverage) and visiting non-mainstream political sites (which the government might want to know about)."[6] Alternatively, Richard Posner considers privacy to involve "withholding information primarily in personal rather than business contexts."[7] However, neither of these aspects of privacy are the subject of this article. Instead, the focus is on whether to place limitations on access to information about the behavior of an individual that has economic value to the entity that possesses it, for example information about the individual's internet searches and purchases. Moreover, this article does not address privacy issues that arise when, for example, data about individuals are collected and used by government agencies to improve the quality of public services or by non-profit institutions in connection with their offerings. Finally, whereas the National Institute of Standards and Technology ("NIST") distinguishes between privacy risks related to cybersecurity (examples of which are "data theft by external attackers or the unauthorized access or use of data by employees") and "potential problems individuals could experience from system, product, or service operations with data" that are "unrelated to cybersecurity incidents," this article is concerned only with the latter types of privacy risks.[8]

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5 JOSHUA GANS, ENHANCING COMPETITION WITH DATA AND IDENTITY PORTABILITY 1, 7, 13 (2018) addresses the control of communications *between* individuals whether they use the same or different platforms. In order to promote competition between platforms, Gans has proposed what he calls identity portability under which "if users of a particular platform give permission to send messages to person A, then, should person A change digital platforms, she can have all messages forwarded to her on the new network." Under this proposal, not only would user A be able to port her own data to the new platform, she would also continue to receive the messages from others that she would have received had she not changed platforms.

6 Adam Cohen, *Will We Ever Get Strong Internet Privacy Rules?*, TIME (Mar. 5, 2012), http://ideas.time.com/2012/03/05/will-we-ever-get-strong-internet-privacy-rules/.

7 Richard A. Posner, *The Right of Privacy*, 12 GA. L. REV. 393, 393 (1978).

8 NAT'L INST. OF STANDARDS AND TECH., U.S. DEP'T OF COMMERCE, NIST PRIVACY

Finally, just as there are several dimensions of privacy, there are a number of different types of data. In this regard, the Article 29 Data Protection Working Party of the European Commission makes the important distinction among **"**[d]ata (that are) actively and knowingly provided by the data subject,**"**[9] **"**[o]bserved data provided by the data subject by virtue of the use of the service or the device,**"**[10] and **"**inferred data and derived data … created by the data controller on the basis of the data **'**provided by the data subject.**' "**[11] This article considers only the two categories of **"**provided**"** data.

I. THE VALUE OF CONSUMER DATA

As Acquisti, Taylor, and Wagman have observed,

> [T]he Internet has evolved from an architecture of decentralized and possibly anonymous interactions … to one where packets of data capturing all types of behaviors … are uniquely … and sometimes personally identified … chronicles of peoples' actions, desires, interests, and mere intentions are collected by third parties, often without individuals' knowledge or explicit consent.… Such vast amounts of collected data have obvious and substantial economic value. Individuals' traits and attributes … but also her clickthroughs, comments posted online, [and] photos uploaded to social media … are increasingly regarded as business assets that can be used to target services or offers, provide relevant advertising, or be traded with other parties.[12]

Similarly, *Unlocking Digital Competition*, the Report of the Digital Competition Expert Panel, commissioned by the Chancellor of the Exchequer and Secretary of State for Business, Energy and Industrial Strategy of the United Kingdom, notes that "detailed knowledge about consumers' behaviour or purchasing intentions, in some cases held in near-real time, can be valuable. This data makes targeted advertising possible, for example to be deployed when a consumer is

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FRAMEWORK: A TOOL FOR IMPROVING PRIVACY THROUGH ENTERPRISE RISK MANAGEMENT 1, 3 (2020), https://www.nist.gov/system/files/documents/2020/01/16/NIST%20Privacy%20Framework_V1.0.pdf.

9 Data Working Party Directive 95/46, art. 29, 2016 O.J. 1, 10 (EC).

10 *Id.*

11 *Id.*

12 Alessandro Acquisti et al., *The Economics of Privacy*, 54 J. OF ECON. LITERATURE 442, 444 (2016); Daisuke Wakabayashi & Karen Weise, *Attention, Amazon Shoppers: Google Wants Some of Your Spending Money*, N.Y. TIMES (May 14, 2019), https://www.nytimes.com/2019/05/14/technology/google-shopping-amazon-rivalry.html (reporting that Amazon has … quietly been building tools to help brands show video and display ads to consumers on other websites based on the rich data they have on their customers. For example, someone using a credit card from one bank to pay for Amazon purchases may see ads for another bank's cards when reading the news online).

considering making a purchase. It also allows services to be tailored towards groups or individuals."[13]

Because access to large amounts of information about consumers has economic value, it is unsurprising that firms undertake substantial efforts to increase the amount of such information that they accumulate. Argenton and Prüfer have observed that "[a]ccess to more search log data today leads to higher perceived search quality. Higher perceived search quality leads to more demand for searches tomorrow, which in turn creates even more search log data tomorrow than today."[14] Crémer, de Montjoye, and Schweitzer ("Crémer *et al*") note that "having accumulated large amounts of relevant data over a long period of time often provides a strong competitive advantage to incumbents."[15] Martens, de Fortuny, and Provost "empirically demonstrate that when predictive

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13 DIG. COMPETITION EXPERT PANEL, UNLOCKING DIGITAL COMPETITION 23 (2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf; Jon Lafayette, *Data Shows Digital Video Is Tougher Rival for TV*, MULTICHANNEL NEWS (May 6, 2019), https://www.multichannel.com/news/data-shows-digital-video-is-tougher-rival-for-tv (explaining that Walmart Media Group general manager Stefanie Joy has stated, "We invite you to leverage our first-part shopper data by delivering highly relevant and accountable advertising," and Kristi Argyilan, president of Roundel, Target's in-house advertising agency and media network, has stated that Roundel will use data that it gathers from Target's customers to send "the right ad to the right people at the right time on the right channels, whether that be on our Target platforms or off platform with other publishers").

14 Cédric Argenton & Jens Prüfer, *Search Engine Competition with Network Externalities*, 8 J. OF COMPETITION L. & ECON. 73, 74–75 (2012).

15 JACQUES CRÉMER ET AL., EUROPEAN COMM'N, COMPETITION POLICY FOR THE DIGITAL ERA 33 (2019) (according to the authors, the types of data that have value include both individual-level data and anonymous access to a large amount of individual level data); *Contra*, ANJA LAMBRECHT & CATHERINE E. TUCKER, CAN BIG DATA PROTECT A FIRM FROM COMPETITION? 9–10 (2015), https://www.competitionpolicyinternational.com/wp-content/uploads/2017/01/CPI-Lambrecht-Tucker.pdf ("The skill in making big data valuable is being able to move from mere observational correlations to correctly identifying, potentially outside of big data, what correlations should form the basis for strategic action . . . successful companies have developed the ability to design, implement, and evaluate and then act upon meaningful field experiments. It is this 'test and learn' environment, coupled with the skill to take action on the insights, which can make big data valuable." A possible reconciliation of this observation with that of the Google executive who claimed that Google's advantage stems from having more data rather than having better algorithms is that many firms may have the ability to make effective use of the data that they possess but that their ability to do so is, nonetheless, constrained by the amount that they possess.); Hal R. Varian, *Big Data: New Tricks for Econometrics*, 28 J. OF ECON. PERSPECTIVES 3, 3 (2014) ("[L]arge datasets may allow for more flexible relationships than simple linear models."); Hal R. Varian, Lecture at the 2007 Angelo Costa Lecture in Rome, The Economics of Internet Search (Nov. 2006) ("Since the probability of purchase is low, even when ads are relevant, one has to reach a large audience to have any hope of selling a product. Hence new search engines who hope to become economically successful have to pay large fixed costs to build the scale necessary to serve enough ads to cover those entry costs.").

models are built from sparse, fine-grained data … we continue to see marginal increases in predictive performance even to very large scale.… This implies that institutions with large data sets—plus the skill to take advantage of them—potentially can obtain substantial competitive advantage over institutions without such access or skill."[16] The Competition Committee of the Organisation for Economic Co-operation and Development ("OECD") Directorate for Financial and Enterprise Affairs has argued that:

> [A] company with a large base of users is able to collect more data to improve the quality of the service (for instance, by creating better algorithms) and, this way, to acquire new users – "user feedback loop." On the other hand, companies are able to explore user data to improve ad targeting and monetise their services, obtaining additional funds to invest in the quality of the service and attracting again more users – "monetisation feedback loop." These interminable loops can make it very difficult for any entrant to compete against an incumbent with a large base of customers.[17]

Finally, Rubinfeld and Gal note that:

> If the benefits that individuals receive are positively related to the number of other individuals that utilize or consume a product, the resulting barrier will have an effect that is similar in its impact to a more traditional supply-side barrier. Substantial (sunk) expenditures will be required to counter or even overcome existing network effects. This may happen when the quality of the product depends on the quality of the data, which, in turn, is affected by the number of data entries, their variety, and their freshness. This is because such data accelerate automated learning. Entry of new firms that do not have such data might be quite difficult.[18]

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[16] Enric Junqué de Fortuny et al., *Predictive Modeling with Big Data: Is Bigger Really Better?*, 1 BIG DATA 215, 215 (2013); DIG. COMPETITION EXPERT PANEL, UNLOCKING DIGITAL COMPETITION 34 (2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf ("[T]he available evidence on this subject is somewhat mixed. Some studies have found that larger datasets can be valuable assets for predictive analysis, despite ultimately reaching a point at which the returns from data collection start to diminish. Others, such as analysis of Netflix, suggest that in some markets the returns to scale for data may be rapidly diminishing.").

[17] ANIA THIEMANN & PEDRO GONZAGA, ORG. FOR ECON. CO-OPERATION AND DEV., BIG DATA: BRINGING COMPETITION POLICY TO THE DIGITAL ERA 10 (2016), https://one.oecd.org/document/DAF/COMP(2016)14/en/pdf.

[18] Daniel L. Rubinfeld & Michal S. Gal, *Access Barriers to Big Data*, 59 ARIZ. L. REV. 339, 355 (2017).

II. THE DATA/COMPETITION NEXUS

The view that having access to more consumer data can enhance a firm's competitive position was embraced by the Antitrust Division of the United States Department of Justice ("DOJ") when it approved an advertising agreement between Microsoft and Yahoo.[19] Specifically, the division stated that:

> The transaction will enhance Microsoft's competitive performance because it will have access to a larger set of queries, which should accelerate the automated learning of Microsoft's search and paid search algorithms and enhance Microsoft's ability to serve more relevant search results and paid search listings, particularly with respect to rare or "tail" queries. The increased queries received by the combined operation will further provide Microsoft with a much larger pool of data than it currently has or is likely to obtain without this transaction. This larger data pool may enable more effective testing and thus more rapid innovation of potential new search-related products, changes in the presentation of search results and paid search listings, other changes in the user interface, and changes in the search or paid search algorithms.[20]

Despite the view that a firm's ability to compete may be enhanced if it can combine data from different sources, at least one competition authority has placed limits on such behavior. In a recent decision, Germany's Federal Cartel Office held that individual services owned by Facebook, such as WhatsApp and Instagram, could continue to collect user data, but that Facebook must have

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19 Press Release, Dep't of Justice, Statement of the Department of Justice Antitrust Division on Its Decision to Close Its Investigation of the Internet Search and Paid Search Advertising Agreement Between Microsoft Corporation and Yahoo! Inc. (Feb. 18, 2010), https://www.justice.gov/opa/pr/statement-department-justice-antitrust-division-its-decision-close-its-investigation-internet.

20 *Id.*; *Microsoft & Yahoo Search Deal*, SEARCH ENGINE LAND, https://searchengineland.com/library/features/microsoft-yahoo-merger# (last visited Apr. 10, 2020); Allen P. Grunes & Maurice E. Stucke, *No Mistake About It: The Important Role of Antitrust in the Era of Big Data*, THE ANTITRUST SOURCE, April 2015, at 1, 3; Daniel Sokol & Roisin Comerford, *Antitrust and Regulating Big Data*, 23 GEO. MASON L. REV. 1129, 1146 (2016) (showing that both report cases in which companies raised the prospect of "data-driven efficiencies" during merger investigations, which, if the efficiency claims are to be credited, means that the parties claimed that the efficiencies were "merger specific," i.e., that they could not be achieved in other ways); Andres V. Lerner, *The Role of "Big Data" In Online Platform Competition*, SSRN, Aug. 2014, at 1, 26 (presenting a number of examples where "providers . . . forge partnerships in order to offer valuable content based on data collected by other firms," and instances in which companies share their data with others; however, it cannot be assumed that they will always do so, and where control of the data provides a competitive advantage, a better assumption is that they will not).

users' voluntary consent before assigning the collected data to Facebook user accounts.[21] When Facebook does not have consent, the data must remain with the respective service that collected it and cannot be processed in combination with Facebook data.[22] Thus, under the terms of this decision, the various Facebook services would be operated as separate entities.[23] The Bundeskartellamt also held that "collecting data from third party websites and assigning them to a Facebook user account will also only be possible if users give their voluntary consent."[24] In explaining the rationale for the decision, Andreas Mundt, President of Bundeskartellamt, emphasized how Facebook's ability to combine data about a given individual from a number of different sources helped the company gain market power.[25] Thus, the decision was apparently motivated by competition rather than by privacy concerns.[26]

More recently, the European Commission opened an investigation into the use by Amazon of data from independent retailers that sell on its marketplace.[27] Based on its investigation, the Commission concluded that Amazon appears to use "competitively sensitive information – about marketplace sellers, their products and transactions on the marketplace" and that, if proven, this may violate "EU competition rules on anticompetitive agreements between companies … and/or on the abuse of a dominant position…."[28]

III. PROMOTING COMPETITION AS THE SOLE POLICY OBJECTIVE

In order to separate consideration of the issue of privacy from that of competition, this article begins by assuming that consumers place no limits on the use of their information by entities they directly deal with, or "collectors" of

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21 *Bundeskartellamt Prohibits Facebook from Combining User Data from Different Sources*, BUNDESKARTELLAMT (July 2, 2019), https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2019/07_02_2019_Facebook.html?nn=3591568.

22 *Id*.

23 *Id*.

24 *Id*.

25 *Id*.

26 *See* Sara Germano, *Facebook Wins Appeal Against German Data-Collection Ban*, WALL ST. J. (Aug. 26, 2019), https://www.wsj.com/articles/facebook-wins-appeal-against-german-data-collection-ban-11566835967 (explaining that the Dusseldorf Higher Regional Court rejected the Cartel Office's findings that Facebook abused its market power to gather information from users without their consent). *But see* Joseph Nasr, *German Cartel Office to Take Facebook Case to High Court*, REUTERS (Aug. 26, 2019) https://www.reuters.com/article/us-facebook-germany/german-cartel-office-to-take-facebook-case-to-high-court-idUSKCN1VG1AJ (explaining that the Cartel Office filed an appeal of the Regional Court's decision).

27 Press Release, European Comm'n, Antitrust: Commission Opens Investigation into Possible Anti-Competitive Conduct of Amazon (July 17, 2019).

28 *Id*.

their information, and any entities to which these collectors choose to transfer their information.[29] Where, by assumption, users have no objections to the combining of information about themselves that has been initially obtained by different entities, the question remains as to whether the initial collectors will choose to cooperate with their rivals by sharing that information and, if not, what policies might encourage or facilitate such cooperation.

If there are large disparities in the amounts of information that are acquired by different entities, cooperation in information sharing is unlikely. This is because entities with disproportionately large amounts of information have relatively little to gain and much to lose from sharing the information that they collect. Indeed, by refusing to share information data with their smaller rivals, large entities may be able to eliminate these rivals as competitors and instead turn them into customers.[30] As Crémer *et al* have observed, "if data that is not available to market entrants provides a strong competitive advantage, its possession may lead to market dominance…. Any discussion of market power should therefore analyse case by case the access to data available to the presumed dominant firm but not to competitors, and the sustainability of any such differential access to data."[31] The Market Structure and Antitrust Subcommittee of the Committee for the Study of Digital Platforms makes the same point when it observes that "to maintain or improve their competitive advantage, incumbents have strong incentives to limit openness or interoperability and to be averse to data-portability policies."[32] Similarly, Rubinfeld and Gal note that:

> Data collectors and analyzers have the potential to sell or license their data sets to multiple users. Yet legal and technological barriers in all parts of the data-value chain may limit data portability.… With or without these potential barriers, there are likely to be strong economic incentives to maintain control over large data sets and to create structural barriers, potentially rendering at least parts of the chain noncompetitive.[33]

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29 *See generally* Maureen K. Ohlhausen & Alexander P. Okuliar, *Competition, Consumer Protection, and The Right [Approach] to Privacy*, 80 ANTITRUST L.J. 121, 134–36, 56 (2015) (evaluating the risk of combining privacy and competition policies and summarizing proposals to protect privacy with competition law).

30 *See* NORTON ROSE FULBRIGHT, COMPETITION WORLD 15-16 (Peter Scott & Susanna Rogers, 2d ed. 2017) (explaining that rivals can also be eliminated by acquiring them).

31 JACQUES CRÉMER ET AL., EUROPEAN COMM'N, COMPETITION POLICY FOR THE DIGITAL ERA 4 (2019).

32 MKT. STRUCTURE & ANTITRUST SUBCOMM., COMM. FOR THE STUDY OF DIG. PLATFORMS, STIGLER CTR. FOR THE STUDY OF THE ECON. & THE STATE, REPORT 19 (2019) (stating that incumbents may create or maintain systems that make data portability difficult).

33 Rubinfeld & Gal, *supra* note 18, at 373, 343 (discussing the reluctance of firms to

Finally, the European Commission recently noted that one of the reasons that "data sharing between companies has not taken off at sufficient scale" is the "lack of economic incentives (including the fear of losing a competitive edge)…."[34] The Commission went on to note that it "will explore the need for legislative action on issues that affect relations between actors in the data-agile economy to provide incentives for horizontal data sharing across sectors (complementing data sharing within sectors)."[35]

More generally, large firms often have limited incentives to cooperate with their smaller rivals, a situation that Joseph Farrell and I have characterized as the "Pesky Little Brother" phenomenon.[36] Along similar lines, Shapiro and Varian have noted that: (1) a network is more valuable if you can control when others can interconnect with you;[37] (2) accessible technologies are more likely to gain popularity and success for innovators that can control the use and design of their technology; [38] and (3) an incumbent can attempt to deny access to potential new technology entrants by "extending the life of its own technology."[39] Although Shelanski has noted that "[n]etwork effects can be shared among rivals if those rivals interconnect with each other or in some other way share the source of the positive network externality,"[40] as Noam has observed in another context, this is most *unlikely* to occur when there is "an asymmetry in bargaining strength and in the urgency for interconnection."[41] Rubinfeld and Gal make the same point when they observe that "where a firm's comparative advantage relies on the use of a unique data set, and it is best positioned to make efficient use of this data, its incentives to limit the transferability of the data will be higher."[42]

The argument that the information that a firm collects about its users should *not* be available for use only by that firm is made forcefully in *Unlocking Digital Competition.*[43] Specifically, the Expert Panel that produced the report observed

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enable data portability).

34 EUROPEAN COMM'N, A EUROPEAN STRATEGY FOR DATA 7 (2020), https://ec.europa.eu/info/sites/info/files/communication-european-strategy-data-19feb2020_en.pdf.

35 *Id.* at 13.

36 Stanley M. Besen & Joseph Farrell, *Choosing How to Compete: Strategies and Tactics in Standardization*, 8 J. ECON. PERSPECTIVES 117, 126-29 (1994).

37 CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY 197 (1998).

38 *Id.* at 225.

39 *Id.* at 235.

40 Howard A. Shelanski, *Information, Innovation, and Competition Policy for the Internet*, 161 UNIV. PA. L. REV. 1663, 1684 (2013).

41 Eli M. Noam, *Interconnection Practices*, IN HANDBOOK OF TELECOMMUNICATIONS ECONOMICS 390 (Martin E. Cave et al. eds., 2002).

42 Rubinfeld & Gal, *supra* note 18, at 367.

43 DIG. COMPETITION EXPERT PANEL, UNLOCKING DIGITAL COMPETITION 6, 9–10, 74–77 (2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/

that market competition will not fix a digital technology system whose "market tipping" nature rewards established companies that have competitive advantages because of their large data sets in a "winner-takes-most" scenario.[44] The Panel went on to recommend the creation of a "digital markets unit [that] would be charged with enabling greater personal data mobility and systems with open standards [to] … increase competition and consumer choice."[45] It further noted that, while some interoperability obstacles exist due to a lack of technical development and uniformity in technology, others remain simply because big companies benefit from their existence. Although the Panel argues that data sharing is essential to promoting competition, it is significant that it would have the digital markets unit responsible for protecting privacy as well as promoting competition, which might lead to less data sharing.[46]

Although a case might be made for compulsory data sharing among competitors, because imposing obligations on data collectors to share those data with their rivals is likely to be difficult and complicated, competition authorities could seek to prevent large disparities in data holdings from developing in the first place, most obviously by preventing mergers or deterring acquisitions that would lead to that result.[47] Where data sharing among competitors exists, or where such data sharing is likely to develop, competition authorities could take into account the effect of a proposed merger or acquisition on the incentives of that form of cooperation to continue or develop.[48] That is, even if the immediate

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attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf.

44 *Id.* at 9 ("There may be situations where opening up some of the data held by digital businesses and providing access on reasonable terms is the essential and justified step needed to unlock competition. Any remedy of this kind would need to protect personal privacy and consider carefully whether the benefits justified the impact on the business holding the data. But the ability to pursue data openness is an essential tool for the unit.").

45 *Id.* at 5–6; Theresa May, Prime Minister of U.K., Speech Opening London Tech Week (June 10, 2019) (explaining that the outgoing Prime Minister Theresa May indicated that the U.K. government intends to implement this recommendation).

46 *See generally Facebook, Inc., In the Matter of*, FED. TRADE COMMISSION, https://www.ftc.gov/enforcement/cases-proceedings/092-3184/facebook-inc (last updated July 24, 2019) (discussing recent examples of actions taken by regulators to deal with privacy issues including the FTC's $5 billion judgement against Facebook); *The CNIL's Restricted Committee Imposes a Financial Penalty of 50 Million Euros Against GOOGLE LLC*, CNIL (Jan. 21, 2019), https://www.cnil.fr/en/cnils-restricted-committee-imposes-financial-penalty-50-million-euros-against-google-llc.

47 *See, e.g.*, Complaint at 1, United States v. Facebook, Inc., No. 19-cv-2184 (D.D.C. July 24, 2019); *The CNIL's Restricted Committee Imposes a Financial Penalty of 50 Million Euros Against GOOGLE LLC*, CNIL (Jan. 21, 2019), https://www.cnil.fr/en/cnils-restricted-committee-imposes-financial-penalty-50-million-euros-against-google-llc (providing recent examples of actions taken by regulators to deal with privacy issues).

48 Daniel Sokol & Roisin Comerford, *Antitrust and Regulating Big Data*, 23 GEO. MASON L. REV. 1129, 1145–46 (2016).

effect of a proposed merger on competition may appear to be benign, the merger could be challenged if its indirect effect is to reduce substantially the incentives of the merged entity to share data with its rivals and thus to increase concentration among suppliers significantly.[49] Of course, there should be a reasonable expectation that this would be the case.

In an analogous situation in the 1990s, a small number of "top-level" internet backbones competed to deliver traffic from and to Internet Service Providers ("ISPs") (a service known as transit), and cooperated by exchanging, at no charge, the traffic that originated at the ISP customers on one of the backbones that was destined to be delivered to the ISP customers of another of the backbones (a service known as peering).[50] When MCI and WorldCom, each of which operated one of the top-level backbones proposed to merge, they were required to divest one of the backbones. This preserved the rough symmetry among backbones that had previously existed, thus leaving their incentives to exchange internet traffic unaffected.[51]

As DOJ official Constance Robinson explained:

> Prior to the MCI/WorldCom merger, no single backbone provider reached a disproportionate amount of destinations on the Internet relative to other major players. There was a rough equality, with each backbone provider depending on the other. Each backbone provider, therefore, had an incentive to support efficient interconnections because its failure to do so would have caused such a degradation of quality that it risked losing customers to the other networks. That incentive would change, however, if the two largest backbone providers were combined…. By giving MCI/WorldCom a disproportionately large customer base, the merger would have changed MCI/WorldCom's incentives from favoring compatibility toward favoring incompatibility.[52]

By analogy, in deciding whether to approve a proposed merger of firms for which access to data provides a significant competitive advantage, a competition authority should analyze the effect of the merger on the incentives of the merging parties to share data with others. Where the evidence indicates that their incentives to do so would be adversely affected to a significant degree, the

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49 *Id.* at 1157–58.

50 *See* Stanley M. Besen & Mark A. Israel, *The Evolution of Internet Interconnection from Hierarchy to "Mesh": Implications for Government Regulation,* 25 INFO. ECON. & POL'Y 235, 235 (2013).

51 *See generally* Constance K. Robinson, Director of Operations and Merger Enf't, U.S. Dep't of Justice Antitrust Division, Address at the Practicing Law Institute: Network Effects in Telecommunications Mergers – MCI WorldCom Merger: Protecting the Future of the Internet (Aug. 23, 1999).

52 *Id*.

merger might not be approved.[53] Such a "structural" approach would clearly be preferable to employing "behavioral" remedies, for example, by allowing the merger and then requiring the "dominant" platform to make available the data that it collects to its smaller rivals.[54] Following the same reasoning, the Australian Competition & Consumer Commission has recommended that the Australian Competition and Consumer Act of 2010 be amended to include, as a factor in analyzing the effects of a merger, "the nature and significance of assets, including data and technology, being acquired directly or through the body corporate."[55]

Along the same lines, the Federal Trade Commission ("FTC") recently "issued Special Orders to five large technology firms, requiring them to provide information about prior acquisitions not reported to the antitrust agencies under the Hart-Scott-Rodino ("HSR") Act."[56] In their statement accompanying the FTC's announcement, Commissioners Wilson and Chopra stated that the FTC should:

> Prioritize … studies that explore consumer protection issues arising from the privacy and data security practices of technology companies, including social media platforms. In particular, we

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53 Press Release, Dep't of Justice, Justice Department Reviewing the Practices of Market-Leading Online Platforms (July 23, 2019) (discussing how the same logic applies to the analysis of exclusive contracts for the use of data because, as in mergers, a firm that acquires exclusive control over very large amounts of data through contract may have only limited incentives to enter data sharing arrangements with its competitors. The United States Department of Justice recently announced that "the Department's Antitrust Division is reviewing whether and how market-leading online platforms have achieved market power and are engaging in practices that have reduced competition, stifled innovation, or otherwise harmed consumers."); Makan Delrahim, Assistant Att'y Gen., U.S. Dep't of Justice, Antitrust Div., Address at Harvard Law School: "Blind[ing] Me with Science"*: Antitrust, Data, and Digital Markets (Nov. 8. 2019) ("The Antitrust Division is studying the ways market power can manifest itself in industries where data plays a key role.").

54 Giuseppe Colangelo & Mariateresa Maggiolino, *Data Accumulation and the Privacy-Antitrust Interface: Insights from the Facebook Case for the EU and U.S.* 8–9, 34 (Transatlantic Tech. Law Forum, Working Paper No. 31, 2018) (explaining that this approach would be employed by a "competition-only" agency that would not need to interject privacy considerations into its analysis. Also noting that while the Bundeskartellamt "*also* applies data protection principles" in the Facebook matter, "Facebook's practice of forcing users to choose between accepting the whole Facebook package or not using Facebook at all indicates that Facebook is imposing unfair conditions and/or foreclosing rivals, with the ultimate effect of *impairing competition* in the advertising market.").

55 AUSTRALIAN COMPETITION & CONSUMER COMM'N, DIGITAL PLATFORMS INQUIRY 105 (2019).

56 *FTC to Examine Past Acquisitions by Large Technology Companies*, FED. TRADE COMMISSION (Feb. 11, 2020), https://www.ftc.gov/news-events/press-releases/2020/02/ftc-examine-past-acquisitions-large-technology-companies.

> encourage the FTC to study whether and, if so, how content curation and targeted advertising practices impact data collection, use, and sharing, and how the monetization of data impacts the creation and refinement of algorithms that drive content curation and targeted advertising practices.[57]

As an alternative to blocking a merger that would consolidate the data holdings of the merging firms, a competition authority might require, as a condition for its approval, that existing data sharing arrangements be preserved. For example, the proposed acquisition by Google of ITA Software, the operator of an airline pricing and shopping system that provided "ongoing access to seat and fare class availability data," raised the issue of whether Google would continue to provide access to the system to its search engine rivals.[58] To assure that this would be the case, as a condition of approving the merger, the DOJ required Google to commit to honoring existing licenses, to renew existing licenses under similar terms, and to offer new licensees on fair, reasonable, and nondiscriminatory terms.[59]

Similarly, in connection with the proposed acquisition of DataQuick Information Systems, Inc. by CoreLogic, Inc., "[t]o preserve competition that would be lost due to the acquisition," the FTC required CoreLogic "to license to Renwood Realty Trac ("RealtyTrac") national assessor and recorder bulk data as well as several ancillary data sets that DataQuick provides to its customers." The FTC argued that the order "allow[ed] RealtyTrac to offer customers the data and services that DataQuick offer[ed] and to become an effective competitor in the market."[60]

Finally, in connection with the proposed acquisition by Cox Enterprise, Inc. of Dealertrack Technologies, Inc., the DOJ not only required Cox to divest Dealertrack's automobile dealership full-featured inventory management solution ("IMS"), it also required Cox to "enable the continuing exchange of data and content between the divested IMS business and other data sources, internet sites and automotive solutions that Cox will control."[61] The DOJ also

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57 Statement of Christine S. Wilson, Comm'r, Fed. Trade Comm'n, joined by Rohit Chopra, Comm'r, Fed. Trade Comm'n, Concerning Non-Reportable Hart-Scott-Rodino Act Filing 6(b) Orders (Feb. 11, 2020), reports-technology-platform-companies/ statement_by_commissioners_wilson_and_chopra_re_hsr_6b_0.pdf.

58 Brian J. Smith, *Vertical vs. Core Search: Defining Google's Market in a Monopolization Case*, 9 N.Y.U. J. L. & BUS. 331, 333, 342 (2012).

59 Competitive Impact Statement at 2–3, United States v. Google Inc., No. 11CV00688 (D.D.C. Apr. 8, 2011), 2011 WL 2444825.

60 *See FTC Puts Conditions on CoreLogic, Inc.'s Proposed Acquisition of DataQuick Information Systems*, FED. TRADE COMMISSION (Mar. 24, 2014), https://www.ftc.gov/news-events/press-releases/2014/03/ftc-puts-conditions-corelogic-incs-proposed-acquisition-dataquick.

61 Press Release, Dep't of Justice, Justice Department Requires Cox Automotive to

required Cox to "undertake various obligations to prevent Cox from using Dealertrack's interest in Chrome Data Solutions LP, a company that compiles and licenses vehicle information data for use in inventory systems and other automated solutions and services for the automotive industry."[62]

Interestingly, one of the reasons given by the FTC for *closing* its earlier investigation of Google's proposed acquisition of DoubleClick was that "the evidence [did] not support the conclusion that the aggregation of consumer or competitive information accessible to Google as a result of its acquisition of DoubleClick [was] likely to confer market power."[63] Specifically, the FTC stated that "the evidence indicate[d] that neither the data available to Google, nor the data available to DoubleClick, constitute[d] an essential input to a successful advertising product. A number of Google's competitors have at their disposal valuable stores of data not available to Google."[64] However, in her dissenting statement, Commissioner Harbour noted that:

> Marrying the [Google and DoubleClick] datasets raises long-term competition questions that beg further inquiry [:] In a post-merger online advertising market driven by the value of behavioral targeting, will Google/DoubleClick face meaningful competition? Will any other firm be able to amass a dataset of the same scope and size? Will any other company be able to overcome network effects and offer an equally focused level of behavioral targeting? If advertisers and publishers have to channel their online advertising through Google/DoubleClick in order to access the best dataset that supports targeted advertising, will any other firms have the ability or incentive to compete meaningfully in this market?[65]

Significantly, she concluded that "[i]n the future, the Commission likely will issue Second Requests in other merger investigations that implicate combinations of data as well as potentially overlapping products and services. When those deals arise, the Commission should ensure that the combinations of data are included squarely within the scope of Second Requests."[66]

Finally, a competition authority could analyze whether any claimed efficiencies from combining the data of the merging parties could be achieved by other means. Crémer *et al* note that claims of efficiencies from a merger

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Divest Inventory Management Solution in Order to Complete Acquisition of Dealertrack (Sept. 29, 2015).

62 *Id.*

63 Press Release, Fed. Trade Comm'n, Statement of the Federal Trade Commission Concerning Google/DoubleClick (Dec. 20, 2007).

64 *Id.*

65 Press Release, Fed. Trade Comm'n, Dissenting Statement of Commissioner Pamela Jones Harbour In the Matter of Google/DoubleClick, at 8 (Dec. 20, 2007).

66 *Id.* at 9.

"would not be considered merger-specific if … they would be achievable also via non-exclusive access or interoperability agreements."[67] That is, a competition authority could reject the argument that a merger is needed to create a larger database if the benefits from doing so could be obtained through data sharing across platforms.[68]

IV. SHOULD DATA SHARING BE MADE COMPULSORY?

Unless specifically prevented from doing so, a firm that initially collects data about an individual can use those data to either lower its costs or increase the demand for its products or services.[69] Whether that firm will or should make those data available to other firms, and on what terms, is, of course, a different question.

If access to a very large amount of data created efficiencies that firms could not otherwise achieve, if control of those data by a single firm threatened competition, and if competition were the only concern, firms could be required to share the data that they acquire from their users with other firms.[70] In addition, as suggested by the Market Structure and Antitrust Subcommittee of the Committee for the Study of Digital Platforms, a "[Digital Authority] could set up rules that allow users to easily port their data from one service to another and monitor compliance."[71] Although mandating data sharing is obviously less attractive than maintaining a situation in which firms have incentives to exchange data voluntarily, there may be situations in which compulsory data sharing is the only feasible alternative.

It is useful to begin the discussion of compulsory data sharing by exploring

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67 JACQUES CRÉMER ET AL., EUROPEAN COMM'N, COMPETITION POLICY FOR THE DIGITAL ERA 123 (2019), https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf.

68 Dana Mattioli, *Amazon's Deal Making Threatened by D.C. Scrutiny*, WALL ST. J. (July 3, 2019), https://www.wsj.com/articles/amazons-deal-making-threatened-by-d-c-scrutiny-11562146205?mod=hp_lead_pos2 (noting that a number of acquisitions by Amazon appear to be motivated not "with an eye toward cutting costs by combining jobs and functions," but rather "are designed to build out certain areas and *harness new data*") (emphasis added).

69 Jason Morris & Ed Lavandera, *Why Big Companies Buy, Sell Your Data*, CNN (Aug. 23, 2012), https://www.cnn.com/2012/08/23/tech/web/big-data-acxiom/index.html.

70 Alexei Alexis, *Big Tech's Data Control Faces Antitrust Scrutiny at FTC*, BLOOMBERG L. (Feb. 27, 2019), https://news.bloomberglaw.com/mergers-and-antitrust/big-techs-data-control-faces-antitrust-scrutiny-at-ftc.

71 MKT. STRUCTURE & ANTITRUST SUBCOMM., COMM. FOR THE STUDY OF DIG. PLATFORMS, STIGLER CTR. FOR THE STUDY OF THE ECON. & THE STATE, REPORT 9, 88 (2019) ("Congress should consider creating a specialist regulator, the Digital Authority. The regulator could be tasked with creating general conditions conducive to competition." According to the Subcommittee, the Data Authority "could also set up a process by which a customer can choose to send her data to an entrant by authorizing it to be transferred directly from her former service provider.").

an analogous situation drawn from another context: carrier interconnection in the telecommunications industry. As Noam has noted:

> The historic experience with interconnection around the world shows that interconnection is not made available freely by an incumbent to its competitors. Nor is the claim to interconnection as a right given up voluntarily by new entrants once competition emerges…. Often, the terms of interconnection are left nominally or initially to the parties' negotiation. Yet regulatory intervention is frequent where there is an asymmetry in bargaining strength and in the urgency for interconnection, which is usually the case. Even where formal regulatory intervention does not take place, the negotiations are shaped by the expectations of what the regulator's decisions would be. Those decisions, in turn, depend on fundamental policy priorities. As a matter of empirical fact, interconnection is regulated everywhere where competitive telecommunications exist.[72]

The point here is that, just as interconnecting with their smaller competitors is likely to erode the competitive advantage of large telecommunications carriers, so that those carriers are unlikely to be willing to interconnect unless compelled to do so by regulators, firms with large amounts of data are also likely to be unwilling to share their data with their smaller competitors.[73] In the present context, Crémer *et al* note that "[w]hen the platform is part of an ecosystem, the lack of interoperability with other services of the same ecosystem and the absence or limited access to historical and future ecosystem data will make it difficult for a new entrant to compete on the merit of the specific service and/or algorithm."[74] Furthermore, Prüfer and Schottmüller explain that "data sharing (voluntary, or not) eliminates the mechanism causing data-driven markets to tip. With mandatory data sharing, both competitors face the same cost function; a firm with initially higher demand does not have a cost advantage in producing quality."[75] Finally, Rubinfeld and Gal argue that "[i]f the source of the barriers [to data sharing] is inherently structural, and sharing the data is socially beneficial, a regulatory solution may be appropriate, perhaps by requirements that the data be made widely available at a reasonable and non-discriminatory cost."[76]

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72 Eli M. Noam, *Interconnection Practices*, IN HANDBOOK OF TELECOMMUNICATIONS ECONOMICS 389–90 (Martin E. Cave et al. eds., 2002).

73 *Id.* ("Interconnection is voluntarily initiated by collaborating and *non-competing* carriers, such as those of different countries.").

74 CRÉMER ET AL., *supra* note 67 at 36.

75 Jens Prüfer & Christoph Schottmüller, *Competing with Big Data* 3 (Tilburg Law & Econ. Ctr., Discussion Paper No. 2017-006, 2017).

76 Rubinfeld & Gal, *supra* note 18, at 373.

There are various types of interoperability but the one that is of interest here is what Crémer *et al* refer to as "data interoperability," which they define as "roughly equivalent to data portability but with a continuous, potentially real-time, access to personal or machine user data."[77] They go on to note that "[e]xisting data interoperability mechanisms typically rely on privileged APIs [(Application Programming Interfaces)], which provide to a service B the means to access its users' data through a service A's API, if the users have given authorisation for this transfer of data."[78]

As the experience in mandating interconnection in telecommunications makes clear, mandating data sharing is unlikely to be straightforward. Although the necessary cooperation among telecommunications firms is limited to completing calls that originate on the networks of other operators, disputes can nevertheless arise regarding, among other things: (1) the locations at which interconnection takes place; (2) the quality of interconnection; and (3) the prices charged for interconnection.[79] The necessary conditions for the efficient sharing of data are likely to be at least as complex.[80] Which data would be shared, at what frequency, and at what level of aggregation, as well as the technical standards through which data sharing would take place and the prices, if any, that would be charged by the initial collectors, are among the issues that would have to be addressed in any mandatory data sharing regime.[81] That is why, if feasible, a better solution would be to seek to promote or maintain a market structure in which firms have an economic incentive to share data voluntarily.

Finally, Crémer *et al* suggest that the recent Facebook decision by the Bundeskartellamt "might require consumers to provide consent to data processing by specific services of a dominant firm, which may help to counterbalance the self-reinforcement of dominance by way of preferential data

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77 CRÉMER ET AL., *supra* note 67, at 58.

78 *Id.* at 58–59.

79 WORLD BANK, TELECOMMUNICATIONS REGULATION HANDBOOK, MODULE 3: INTERCONNECTION 4 (Hank Intven & McCarthy Tétrault, 2000) (explaining that under "Some Key Interconnection Issues" it lists, among Framework and Procedural Issues: "Access to standard interconnection terms with incumbent operator," "Independent and timely dispute resolution," and "Non-discriminatory access to interconnection facilities and services"; among Commercial Issues: "Level and structure of interconnection charges," "Unbundling of interconnection charges for different network components and related services," and "Payment for network modifications to facilitate interconnection"; and among Technical and Operational Issues: "Location of Points of Interconnection," "Collocation and sharing of infrastructure (e.g., buildings, poles, conduits, ducts, towers)," and "Quality of interconnection, including availability of sufficient interconnection capacity to avoid congestion, and to ensure the timely provisioning of interconnection services and facilities").

80 *See* IAN OPPERMANN ET AL., DATA SHARING FRAMEWORKS: TECHNICAL WHITE PAPER 7 (ACS 2017).

81 *See id.* at 21.

access."[82] They go on to observe that:

> In some settings, we can expect the foreclosure effects from a refusal to grant access to data to be high, in particular if a high degree of market concentration translates into a high degree of data concentration, and if that data yields an important competitive advantage in serving neighbouring markets. In such a setting, the need to ensure the possibility of entry may argue in favour of mandating access to data.[83]

V. PROMOTING PRIVACY AS THE SOLE POLICY OBJECTIVE

Just as the previous discussion considered how an agency tasked solely with dealing with the link between data sharing and competition might behave, this section considers how a "privacy-only" agency might deal with the link between data sharing and privacy. This agency would deal with: (1) which data could be shared; (2) with whom the data could be shared; and (3) who would decide these issues.

It is useful to begin by specifying the range of policies that might be adopted to deal with the issue of privacy.[84] These include the following:

1. An entity may not use the data that it collects about its users.[85]
2. An entity may use the data that it collects about a user only if the user explicitly grants it permission to do so.[86]

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82 CRÉMER ET AL., *supra* note 67, at 80.

83 *Id.* at 99.

84 *Compare* Andres V. Lerner, *The Role of "Big Data" In Online Platform Competition*, SSRN, Aug. 2014, at 1, 18–19 (claiming that concerns about privacy may be overstated because "competition compels online providers to achieve an efficient balance between the consumer benefits from collecting user data with users' demand for privacy…. [M]ost reputable online providers will bear a significant cost in terms of reduced demand if they overstep user privacy norms. This is especially true for ad-supported online businesses, which are dependent on attracting users in order to monetize through the sale of advertising.", *with* Warwick Ashford, *Many Search Engine Users Unaware of Personal Data Collection*, COMPUTERWEEKLY.COM (May 28, 2019), https://www.computerweekly.com/news/252464048/Many-search-engine-users-unaware-of-personal-data-collection (asserting that Lerner's claim is overstated).

85 *See Overview of Privacy Policies*, CLARIP, https://www.clarip.com/data-privacy/privacy-policy-overview/ (last visited Feb. 2, 2020) (showing that in addition to the differences enumerated here, privacy policies may differ according to the categories of information collected, the business or commercial purpose for collecting or selling the information, and the categories of third parties with whom the business shares the information, as well as whether the policies apply to all firms or only those above a given size).

86 *See* April Lea Pope, *To Behave or Not to Behave: How Behavioral Science Can Inform Policy and the Law*, THE ADVOC., Mar.–Apr. 2016, at 41, 42.

3. An entity may use the data that it collects about a user, but it may not share those data with any other entity unless the user explicitly grants it permission to do so.[87]
4. An entity may share the data that it collects about a user with any other entity unless the user explicitly objects to such sharing.[88]
5. An entity must share the data that it collects about a user with other entities if the user requests that it does so.[89]

At one extreme, a policy with the sole objective of protecting user privacy could preclude a firm from making any use of the data that it collects from its users. A possible defense of this position is that consumers are incapable of

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87 *See NAI Establishes Detailed Requirements for Obtaining Opt-in Consent In Consumer Apps*, NETWORK ADVERT. INITIATIVE (Dec. 2, 2019), https://www.networkadvertising.org/sites/default/files/draft_opt-in_guidance_release.pdf (showing how the Network Advertising Initiative, which describes itself as "the leading self-regulatory association dedicated to responsible data collection and its use for digital advertising companies," recently released a guidance document that describes the "clear and conspicuous detailed notice that is required before a member … obtains Opt-In Consent" that clarifies "that the [user] data will be shared with third parties for advertising purposes"); *see also* NETWORK ADVERT. INITIATIVE, GUIDANCE FOR NAI MEMBERS: OPT-IN CONSENT (2019), https://www.networkadvertising.org/sites/default/files/final_nai_optinconsent-guidance19_final.pdf; Buckley LLP, *New York Considers Privacy Legislation Broader than the CCPA*, LEXOLOGY (Dec. 3, 2019), https://www.lexology.com/r.ashx?l=8P2VDMM (explaining that whereas the NAI provision could be adopted voluntarily by firms, New York state is considering legislation that would require documented consent from a consumer in order for data to be transferred to a third party); Sara Germano, *Facebook Wins Appeal Against German Data-Collection Ban*, WALL ST. J. (Aug. 26, 2019), https://www.wsj.com/articles/facebook-wins-appeal-against-german-data-collection-ban-11566835967 (detailing how under a decision by the Higher Regional Court in Düsseldorf, user consent is required for Facebook to combine data from different Facebook-owned services as well as to assign data collected from third party websites to a Facebook user account); CRÉMER ET AL., *supra* note 67, at 36 (stating that even if some users were to grant permission for the collection of data to be shared with other entities, the entity that receives the shared data might still be at a competitive disadvantage if many users chose not to permit sharing. For example, "the quality of [an] algorithm is a (non-linear) function of the amount of data (say number of users)…. Even if users could choose to have their data entirely ported, a new service would need to convince enough of them to have enough data transferred to develop quality algorithms.").

88 CAL. CIV. CODE § 1798.120(a) (2018) (explaining how the California Consumer Privacy Act provides that "[a] consumer shall have the right, at any time, to direct a business that sells personal information about the consumer to third parties not to sell the consumer's personal information. This right may be referred to as the right to opt out."); *see* IAB PRIVACY, IAB CCPA COMPLIANCE FRAMEWORK FOR PUBLISHERS & TECHNOLOGY COMPANIES 4 (2019), https://www.iab.com/wp-content/uploads/2019/12/IAB_CCPA-Compliance-Framework-for-Publishers-Technology-Companies.pdf (stating that the recently issued IAB CCPA Compliance Framework would require participating publishers to include a link on their digital properties which would allow users to prevent their personal information from being sold).

89 *See* CAL. CIV. CODE § 1798.120(a) (2018); GUIDANCE FOR NAI MEMBERS: OPT-IN CONSENT, *supra* note 87.

making informed judgments about whether the costs of allowing the use of their data by the firm that collects it exceed the benefits.[90] Given the numerous and complex ways in which such data might be used, this is not an unreasonable position. Nevertheless, this policy is unlikely to be adopted anytime soon, perhaps because of a judgment that, for most consumers, the benefits of allowing their data to be used would exceed the costs.

A less extreme position would be to limit the use of a user's data to the firm that collects it, so long as the user "opts in," that is, that the user affirmatively states that the collecting firm can use the data.[91] Whether the decision to do so is an informed one will depend in part on the information provided to consumers about the likely use of their data. In 2007, the FTC proposed that an entity that wishes to make use of the data provide a "consumer-friendly, and prominent statement that data is being collected to provide ads targeted to the consumer."[92] In 2014, the FTC recommended that Congress consider requiring entities that collect data from consumers to inform consumers that their data may be shared with data brokers, "companies whose primary business is collecting personal information about consumers from a variety of sources and aggregating, analyzing, and sharing that information, or information derived from it," and to provide consumers with the ability to opt-out of having their information shared.[93]

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90 Giulio Bonasera, *Should Consumers Be Able to Sell Their Own Personal Data?*, WALL ST. J. (Oct. 13, 2019), https://www.wsj.com/articles/should-consumers-be-able-to-sell-their-own-personal-data-11570971600.

91 Alan McQuinn, *The Economics of "Opt-Out" Versus "Opt-In" Privacy Rules,* INFO. TECH. & INNOVATION FOUND. (Oct. 6, 2017), https://itif.org/publications/2017/10/06/economics-opt-out-versus-opt-in-privacy-rules.

92 *See* Fed. Trade Comm'n, *FTC Staff Proposes Online Behavioral Advertising Privacy Principles*, FED. TRADE COMMISSION (Dec. 20, 2007), https://www.ftc.gov/news-events/press-releases/2007/12/ftc-staff-proposes-online-behavioral-advertising-privacy (stating that in 2007, the FTC Staff proposed that: "Every Web site where data is collected for behavioral advertising should provide a clear, consumer-friendly, and prominent statement that data is being collected to provide ads targeted to the consumer and give consumers the ability to choose whether or not to have their information collected for such purpose." With respect to "sensitive data – medical information or children's activities online, for example," the Staff proposed that "companies should only collect sensitive data for behavioral advertising if they obtain affirmative express consent from the consumer to receive such advertising."); *see also* Anne Cullen, *Sen. Floats Making National 'Do Not Track' List for User Data*, L. 360 (May 21, 2019), https://www.law360.com/telecom/articles/1161403/sen-floats-making-national-do-not-track-list-for-user-data?nl_pk=340c08d5-097a-42a7-ba72-38a91a46c280&utm_source=newsletter&utm_medium=email&utm_campaign=telecom (explaining that a recent bill seeks to make compulsory the voluntary approach earlier proposed by the FTC, and that the bill would allow consumers that enrolled in a "national registry" to prevent, among other things, a company that collects a consumer's data from sharing those data with other companies).

93 FED. TRADE COMM'N, DATA BROKERS**:** A CALL FOR TRANSPARENCY AND

Another position, which could contain elements of the "opt in" view, would allow the entity that collects the data to make use of the data but would preclude the entity from sharing it.[94] An example of this position is contained in the decision by the German Federal Cartel Office that is discussed above, which seeks to prevent data sharing among different Facebook entities.[95] Since those entities are not likely to be competitors with one another, the principal objective of this policy appears to be to limit the amount of data about an individual that can be acquired by a single entity, which would seem to reflect a concern about privacy.

Still another position, which is also reflected in the decision of the Bundeskartellamt, is to allow sharing of data among entities so long as users have given their permission to do so.[96] This position, elements of which are also contained in the decision of the German Federal Cartel Office, is to allow some sharing of the data between entities if a user "opts in" but to preclude other uses, as in the limits that the Bundeskartellamt has proposed on data sharing among different Facebook entities.[97]

Finally, I note that, under the terms of the European Union Directive on Payment Services ("PSD2"), "traditional payment service providers *will need to share certain data* with … third-party providers to access payment accounts (e.g., current accounts) and statement details, as well as other account information held by banks and other account-servicing payment service

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ACCOUNTABILITY 3 (2014), https://www.ftc.gov/system/files/documents/reports/data-brokers-call-transparency-accountability-report-federal-trade-commission-may-2014/140527databrokerreport.pdf.

94 Kerry Myers et al., *New Laws Bring Much Tougher Data Protections,* J. OF ACCOUNTANCY, Nov. 2019.

95 *Bundeskartellamt Prohibits Facebook from Combining User Data from Different Sources*, *supra* note 21.

96 Council Directive 2015/2366, art. 46, 2015 O.J. (L 337) 1, 17 (EU) (stating that banks are required to give Third Party Providers access to a customer's payment account data if the customer explicitly consents to such disclosure, which is intended to improve competition and innovation in the EU market for payment services).

97 Dotan Hammer, *United States: New State Laws In the U.S. Aimed at Strengthening Consumer Privacy and Data Security*, MONDAQ (July 10, 2019), https://www.mondaq.com/unitedstates/Privacy/823302/New-State-Laws-In-The-US-Aimed-At-Strengthening-Consumer-Privacy-And-Data-Security (stating that a number of states have adopted or proposed legislation that would increase the control that individuals have over the manner in which their personal data can be used, specifically, whether, and the manner in which, transfers of personal data would require their consent. For example, Maine has adopted legislation that prohibits a provider of broadband internet access from "using, disclosing, selling or permitting access to customer personal information unless the customer expressly consents to that use, disclosure, sale or access."); James R. Carroll et al., *Nevada Enacts Right to Opt Out of Sale of Information*, SKADDEN PRIVACY & CYBERSECURITY UPDATE, June 2019, at 1, 5 (stating Nevada has adopted a law that requires "operators" to establish a mechanism through which consumers can make a "verified request" that their covered information not be sold).

providers ("ASPSPs") *where customers consent to such access*."[98] According to the European Union, "the PSD2 opens the EU payment market for companies offering consumer or business-oriented payment services based on the access to the information from the payment account – so called 'payment initiation services providers' and 'account information services providers.' "[99] Significantly, the PSD2 *requires* entities to share user data with their competitors so long as users have granted them permission to do so.[100]

What is interesting about PSD2 is that it appears to take consumers' desire for privacy directly into account because information sharing is only possible if a consumer affirmatively consents to allow his data to be shared.[101] At the same time, the consumer would clearly be making a tradeoff between competition and privacy because he presumably would allow his data to be shared only if doing so promoted competition for his patronage.[102] The question remains, however, whether the approach has more widespread applicability.

VI. CLASSIFYING DATA

One reason that structural approaches (ones that rely on the incentives of firms to engage in data exchanges) are likely to be superior to behavioral approaches (those that mandate data exchanges) is that it will be difficult to decide which

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98 Andreas Fillman, *Second Payment Services Directive and the General Data Protection Regulation – Payments and Consent for Data Sharing*, SQUIRE PATTON BOGGS (Jan. 2019), https://www.squirepattonboggs.com/~/media/files/insights/publications/2019/01/second-payment-services-directive-and-the-general-data-protection-regulation-payments-and-consent-for-data-sharing/secondpaymentservicesdirectiveandthegeneraldataprotectionregulation.pdf (emphasis added); Inge Graef & Jens Prüfer, *Mandated Data Sharing Is a Necessity In Specific Sectors*, 103 ECONOMISCH STATISTISCHE BERICHTEN 298, 300 (2018) (describing PSD2 as "a perfect example of regulation by the EU legislator to level the playing field in the financial sector").

99 *Payment Services Directive: Frequently Asked Questions*, EUR. COMMISSION (Jan. 12, 2018), http://europa.eu/rapid/press-release_MEMO-15-5793_en.htm?locale=en.

100 DIG. COMPETITION EXPERT PANEL, UNLOCKING DIGITAL COMPETITION 9 (2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking digital_competition_furman_review_web.pdf (explaining that "personal data mobility" would allow consumers to easily control their data sharing with a single service and to apply their data sharing preferences across platforms, like with Open Banking, a UK initiative in which "at the consumer's request, firms share specified account information with a third party in a standardised way," meaning it shares many features of PSD2).

101 *See id.* (explaining that consent is necessary for collecting and processing personal data).

102 *See generally* Santanen, *supra* note 3, at 9, 14 (noting that new technologies are being designed in a "privacy-related policy vacuum," where consumers are provided with great advances in technology as firms compete for their patronage but at the expense of consumer privacy).

data will be mandated to be exchanged. Crémer *et al* define "volunteered data" as data intentionally contributed by the user of a product, "observed data" as data obtained automatically from a user's or a machine's activity, and "inferred data" as data obtained by transforming in a non-trivial manner volunteered and/or observed data.[103] They go on to observe that:

> Where firms or individuals are willing to volunteer very simple data such as name or e-mails, they will frequently be ready to volunteer it repeatedly. Inferred data has undergone a process of refinement. Normally, there will not be a duty to share such results and insights with competitors. Frequently, access requests will therefore zero in on observed data, which often cannot be replicated, and volunteered data that would take a significant amount of effort to volunteer again (e.g. calendar data).[104]

They also point out that data can be collected and used in different forms including individual-level data (e.g. data from a specific user or a machine), bundled individual-level data used anonymously (e.g. movie preferences used for collaborative filtering, aggregated-level data, and profit & loss information), and contextual data (e.g. maps information). Moreover, information can be generated at different frequencies, and data access can either concern historical or real-time data.[105] Data can be personal or non-personal.[106] Furthermore, as the General Data Protection Regulation ("GDPR") notes, "[data] can . . . be requested and used for many different reasons (e.g. to provide complementary services to a product or service provided by a dominant firm, or for the purpose of training algorithms including for uses that are completely unrelated to the fields of activity of the data controller)."[107]

Finally, Rubinfeld and Gal identify what they call the "four primary characteristics of big data – volume, velocity, variety, and veracity."[108] Volume refers to whether data "can only be analyzed through the establishment of a unique platform that can manage substantial volumes of information in a

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103 *See* CRÉMER ET AL., *supra* note 67, at 24–25 (discussing the distinctions between volunteered data, observed data, and inferred data, and noting that "[v]olunteered data can sometimes be obtained easily from the data subject itself. Inferring information from volunteered or observed data is an essential part of competition. Access to observed data – real time or historical – and also volunteered data may sometimes be essential to compete.").

104 *See id.* at 101.

105 *See id.* at 8.

106 *See id.*

107 *See id.* at 8, 104 (noting as well that under the terms of the PSD2, the data that would be shared has been provided directly by the user to his bank, what Crémer *et al.* refer to as volunteered data, so that compelling its transfer is likely to be relatively uncontroversial. More contentious issues would arise if a "collector" were required to transfer what they refer to as observed data, bundled individual-level data, data at high frequencies, and/or data collected in real time.).

108 Rubinfeld & Gal, *supra* note 18, at 345.

reasonable timeframe," velocity refers to the "freshness" of the data, variety reflects "the number of different sources from which the data are gathered," and veracity refers to the "truthfulness" of the data.[109] Some of these characteristics appear to be orthogonal to the classifications used by Crémer *et al*, for example, observed data may or may not be "fresh" or "truthful" but, on the other hand, "velocity" appears to be related to Crémer *et al*'s distinction between real time and historical data.[110]

VII. CAN COMPETITION AND PRIVACY CONCERNS BE RECONCILED?

Since the treatment of individual data raises both competition and privacy concerns, the question naturally arises as to how to reconcile those concerns. For example, a "competition-only" agency might conclude that competition is best served by unfettered, or even compulsory, data sharing, whereas an agency tasked only with protecting consumer privacy might take a different view.[111] Here, I address the issue of how competition-only and privacy-only agencies might interact.[112]

Suppose, for example, that one of the agencies, say the competition-only agency, establishes a policy and the other agency, here the one tasked with privacy concerns, takes that policy as given and establishes its own policy. If, based on the policy adopted by the privacy agency, the competition agency does not wish to change its policy, the situation would be an equilibrium in that neither agency would wish to alter its behavior.[113] Of course, that need not be the case. Suppose, for example, that in response to the policy of the competition agency, the privacy agency adopted a highly stringent policy, one that made it easy for individuals to "opt out" of having their data shared.[114] Because that

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109 *Id.* at 345–47.

110 *See* Sokol & Comerford, *supra* note 48, at 1138 (arguing that although "[p]otential competitors do not need to create a data store equivalent to the size of the incumbent," entrants nevertheless "need to devise a strategy to accumulate highly relevant and timely data"); CRÉMER ET AL., *supra* note 67, at 75.

111 *See* Sokol & Comerford, *supra* note 48, at 1158–59 (discussing the antitrust implications of compulsory data sharing and the risk that it poses to consumer privacy).

112 Case C-238/05, Asnef-Equifax v. Asociación de Usuarios de Servicios Bancarios, 2006 E.C.R. I-11145 (providing an example of an agency that adopted a bifurcated approach to competition and privacy).

113 *See* Marc Jarsulic et al., *Toward a Robust Competition Policy*, CTR. FOR AM. PROGRESS (Apr. 3, 2019), https://www.americanprogress.org/issues/economy/reports/2019/04/03/467613/toward-robust-competition-policy/.

114 *See generally European PSD2 Legislation Puts Privacy Under Pressure. Privacy First Demands PSD2 Opt-Out Register*, PRIVACY FIRST (Jan. 7, 2019),

policy would presumably reduce the number of individuals whose data was being shared between firms voluntarily, the competition agency might decide, in response, to change its policy. For example, it might adopt a more "aggressive" policy, one that placed significant limitations on the ability of initial data collectors to merge so that voluntary data sharing would be more likely. That, in turn, might cause the privacy agency to adopt an even more stringent policy, and so on. This might result in an equilibrium but, of course, that is not guaranteed.[115] An alternative, of course, is for a single agency to be tasked with addressing both competition and privacy concerns, although that would not be a simple task.[116]

VIII. DOES THE PSD2 APPROACH HAVE WIDER APPLICABILITY?

What is intriguing about the PSD2 approach, in which a consumer can affirmatively direct the initial collector of his data to share those data with other entities, is that each individual could presumably trade-off his desire for privacy against the additional competition for his patronage that foregoing some privacy would produce.[117] That is, he would forego privacy only to the extent that the resulting "loss" was smaller than the "gain" from lower prices and/or improved product variety.[118] The question is whether that approach has wider applicability, that is, whether it could be applied in circumstances other than ones in which a consumer can decide whether his financial information can be shared and can direct the "collector," for example his bank, to do so.

For many of the same reasons that mandating data sharing would be difficult,

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https://www.privacyfirst.eu/focus-areas/financial-privacy/672-privacy-first-demands-psd2-opt-out-register.html (explaining the privacy concerns that would warrant an "opt-out" option).

115 *See* Stephen Ley & Valeria Gallo, *PSD2 Standard on Secure Communication: A Balancing Act*, DELOITTE: FIN. SERVS. UK (Jan. 12, 2017), https://blogs.deloitte.co.uk/financialservices/2017/12/psd2-standard-on-secure-communication-a-balancing-act-.html.

116 *See generally* Michael Cocoman & David Schreiber, *How PSD2 Impacts Marketplaces and Platforms: A Stripe Guide for Navigating the European Regulatory Changes*, STRIPE, https://b.stripecdn.com/site-srv/assets/files/connect/guide/Connect-EU-guide-a3236ff86bd352b43e326df559e31122844b844b.pdf (last visited Feb. 2, 2020) (explaining that the digital markets unit establishing in the UK would attempt to take both competition and privacy concerns into account, although precisely how it would "trade off" privacy and competition concerns has not been specified. Yet, this issue does not arise under the PSD2 approach, where each individual can direct the entity that initially collects his or her information to transfer the data to another entity, because an individual is assumed to "internalize" the competition-privacy tradeoff, at least for himself or herself).

117 Ben Rose, *Managing the Risk and Reward of PSD2*, FINTECH WKLY. (Nov. 22, 2019), https://www.fintechweekly.com/magazine/articles/managing-the-risk-and-reward-of-psd2.

118 *See* COMM. ON REG'L HEALTH DATA NETWORKS, DIV. OF HEALTH CARE SERVS., INST. OF MED., HEALTH DATA IN THE INFORMATION AGE: USE, DISCLOSURE, AND PRIVACY 15 (Molla S. Donaldson & Kathleen N. Lohr eds., 1994).

applying the PSD2 approach more widely is likely to be less than straightforward. Specifically, determining which data would be shared, at what frequency, at what level of aggregation, and at what cost to the recipients are likely to be contentious issues, even after setting aside how they interact with privacy concerns.[119] Probably the best that can be hoped for in the near term is the establishment of minimum standards for each of these dimensions of data sharing. In doing so, it would be wise to follow Crémer *et al*'s suggestion to focus on "observed data, which often cannot be replicated, and volunteered data that would take a significant amount of effort to volunteer again (e.g. calendar data)."[120]

IX. CONCLUSION

It should be clear from the previous discussion that developing policies regarding the treatment of data, from either a competition or a privacy perspective, let alone from both of them combined, will not be an easy task. Nevertheless, one can draw three lessons from the analysis. First, if possible, preventing large disparities in data holdings from developing through mergers or exclusive contracts is the preferred policy. Just as competition in internet interconnection was maintained by the requirement that, as a condition of their merger, MCI and WorldCom were required to divest one of their top-level backbones, competition authorities should analyze the effects of proposed acquisitions or exclusive contracts on concentration in data holdings. Second, where feasible, consumers should be given the choice of which of their data may be shared by the initial collector and, indeed, there may be situations in which consumers should be able to require the initial collector to share their data with others, as in the case of PSD2. Finally, there may be situations in which the competitive significance of disparate data holdings is so great that compulsory data sharing may be the appropriate policy, although that is likely to be a difficult policy to undertake.

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119 Yuka Hayashi, *Venmo Glitch Opens Window on War Between Banks, Fintech Firms; Fintech Firms Accuse Banks of Blocking Their Access to Customers' Account Information*, WALL ST. J. (Dec. 14, 2019), https://www.wsj.com/articles/venmo-glitch-opens-window-on-war-between-banks-fintech-firms-11576319402 (describing a dispute between a bank and a firm that claimed that it needed access to depositor data in order to provide its services, with the bank claiming security concerns as its reason for limiting such access).

120 Thomas Tombal, *Economic Dependence and Data Access*, 51 INT'L REV. OF INTELL. PROP. & COMPETITION L. 70, 91 (2020); *see* CRÉMER ET AL., *supra* note 67, at 101.