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ANTITRUST LAW AND DOMINANT-FIRM BEHAVIOR IN THE DIGITAL TECHNOLOGY SECTOR:

*TOWARD AN ACTIONABLE
AGENDA FOR POLICYMAKERS*

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TABLE OF CONTENTS

I.	INTRODUCTION.....	2
II.	FIVE VARIABLES AFFECTING UNCERTAINTY IN OBTAINING ANTITRUST SOLUTIONS FOR DIGITAL TECHNOLOGY PROBLEMS	3
III:	MISINFORMATION AND DISINFORMATION.....	7
IV:	SELF-PREFERENCING.....	11
V.	PREFERENCE-SHAPING AND BEHAVIOR MODIFICATION.....	14
VI.	THE USE OF ADDICTION SCIENCE IN SOFTWARE DESIGN.....	17
VII.	FREE SPEECH AND VIEWPOINT DISCRIMINATION.....	20
VIII.	PRIVACY INTRUSIONS AND DATA BREACHES.....	22
IX.	“UNDEMOCRATIC” MARKET STRUCTURES AND THE POLITICAL POWER OF LARGE FIRMS	26
X.	WORKPLACE FISSURING AND LABOR EXPLOITATION.....	30
XI.	SUMMARY OF FINDINGS AND RECOMMENDATIONS.....	33
XII.	CONCLUSION.....	34

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I. INTRODUCTION

This White Paper explores the use of existing antitrust law as a public policy tool to address major problems involving powerful firms in the digital technology sector. The first government antitrust lawsuits targeting such firms' unilateral conduct and merger activity were filed in 2020. However, the lawsuits do not directly address many of the large-scale public policy problems related to digital technology that have occupied lawmakers, public interest advocates, citizens, scholars, and scientists over the last several years. This White Paper looks broadly at how antitrust solutions map onto to some of these major problems. It offers pragmatic, forward-looking guidance to policymakers seeking to determine where antitrust lawsuits hold the most and least promise and where other policy tools also should be brought to bear.

We identified eight well articulated and widely studied public policy problems that are perceived to cause, often in differing proportions, a combination of social, economic, and political ills linked to large digital technology firms. Some of the identified problems, such as dominant firms' self-preferencing of favored products and services, firms' power to shape user preferences and modify their behavior, and the prevalence of consumer and commercial privacy breaches, may be perceived primarily as economic phenomena. Other problems, including the spread of misinformation and disinformation online, viewpoint discrimination and free speech limitations online, and the misuse of addiction science in software design, may present primarily as political or social concerns. A final set of problems that centers on broken markets, including structurally "undemocratic" markets and the "fissured workplace" associated with modern risks of labor exploitation, arguably are hybrid problems that raise all three kinds of concerns proportionally. Regardless, all eight of the problems have at least some economic, social, and political dimensions and likely require a multi-pronged legal and regulatory response if policymakers wish to address them proactively.

In a companion paper published concurrently with this White Paper, *ANTITRUST, DOMINANT FIRMS, AND PUBLIC POLICY PROBLEMS: A FRAMEWORK FOR MAXIMIZING SUCCESS BY MINIMIZING UNCERTAINTY*, AAI develops a framework for policymakers to assess the risks and benefits of using antitrust litigation to combat complex public policy problems involving dominant firms. This White Paper is an important application of that framework. It does not delimit the societal benefits that are possible when antitrust enforcers bring ambitious cases that are sufficiently grounded in law and economic realities to overcome novel factual settings or nontraditional theories of competitive harm. It also does not address whether and

“This White Paper shows how policymakers can assess the expected utility of antitrust litigation in combatting major public policy problems involving dominant-firm behavior in the digital technology sector.”

how antitrust law can or should be productively reformed, whether through the common law process of reinterpreting precedent or through sensible legislative or administrative proposals. Rather, it provides a pragmatic analysis based on several variables that arise from a descriptive account of how the existing law, as interpreted by courts to date, polices dominant-firm behavior. We leave for another day the important and related question of whether and how our understanding of antitrust law's capabilities could be deepened or expanded to better promote competition that would, in turn, more effectively address these issues. That question will be the subject of future analysis and scholarship.

The White Paper proceeds in several sections. Section II summarizes the framework developed in AAI's companion paper. Sections III-X then examine the eight identified problems in the digital technology sector and apply the framework, making findings and recommendations. Section XI summarizes the major findings and recommendations. Section XII concludes.

II. FIVE VARIABLES AFFECTING UNCERTAINTY IN OBTAINING ANTITRUST SOLUTIONS FOR DIGITAL TECHNOLOGY PROBLEMS

The companion paper to this White Paper shows how policymakers can assess the expected benefits of antitrust litigation under current law and precedent in combatting major public policy problems involving dominant-firm behavior in the digital technology sector.¹ It explains that policymakers can obtain useful, albeit imperfect guidance by observing the degrees of uncertainty associated with various kinds of antitrust challenges that come before the judges responsible for delineating antitrust law's boundaries and capabilities from case to case. Although antitrust litigation involves high baseline levels of uncertainty and often turns heavily on the unique facts and circumstances of a given case, certain recurring areas of agreement and disagreement about the underlying policy goals of the law tend to disproportionately shape both litigants' arguments and judges' decisions. Variables derived from these key areas therefore can provide policymakers rough guidance as to how the initiation of antitrust litigation will affect the contours of a given public-policy problem.

The companion paper begins from the premise that the existing antitrust laws can potentially help policymakers address major public policy problems associated with dominant-firm behavior in two primary ways. First, antitrust lawsuits can deter socially undesirable dominant-firm behavior. Under existing law, deterrence is possible when plaintiffs can make plausible evidentiary allegations suggesting that dominant-firm behavior produces an anticompetitive effect. All else equal, Supreme Court law permits claims supported by plausible evidentiary allegations of an anticompetitive effect to proceed past the preliminary stages of antitrust litigation.² Such claims have deterrence

value, even if they are ultimately unsuccessful, because they impose meaningful litigation costs on defendants and help alert judges, legislators, regulators, other businesses, and the public to the defendant's socially undesirable behavior.³

Second, antitrust lawsuits can generate remedies that restore lost competition. Remedies may be possible based on plausible evidentiary allegations alone, because remedies sometimes can be achieved by voluntary settlement. However, remedies often require plaintiffs to prevail at subsequent stages of litigation by successfully supporting and proving their allegations, including at summary judgment and trial. Such remedies also require judges to fashion equitable orders that effectively restore the competition that has been lost as a result of the challenged conduct or merger, often by mandating divestiture of assets or lines of business.

The companion paper identifies five key variables that affect degrees of uncertainty in obtaining socially desirable deterrent and remedial relief through antitrust litigation:

- 1. The threat of market failure**
- 2. The welfare tradeoffs caused by lawful competition**
- 3. The detectability of a forced wealth transfer to a firm with market power**
- 4. The nature of the plaintiffs' allegations of an anticompetitive effect**
- 5. The compatibility of any "incommensurable" competitive effects**

The five uncertainty variables are derived from core areas of policy agreement and disagreement regarding the U.S. Supreme Court's articulation of Congress's goal in enacting the antitrust laws. That goal, according to the Court, was "to encourage competitive markets to promote consumer welfare."⁴ There is widespread agreement among advocates and litigants that antitrust law should continue to "encourage competitive markets," at least to the extent there is a shared understanding of the concept of "competition." There is widespread disagreement about whether antitrust law should continue to "promote consumer welfare" as that term has been defined and re-defined over the last several decades.

A. GUIDANCE FROM THE ROUGH "COMPETITION" CONSENSUS

The first two variables emerge from widespread acceptance of the view that antitrust law seeks to protect "competition," at least to the extent the term and concept have a shared meaning.⁵ The first two variables are rooted in the fact that antitrust enforcement promotes competition notwithstanding that competition sometimes produces socially undesirable consequences. Both variables thus suggest that policymakers assessing the expected benefits of antitrust litigation should consider whether a law that promotes competition serves their particular goals and needs. Antitrust law will not serve as a useful tool to achieve policy ends that are at odds with competition.

The first variable recognizes that when competition occurs within the context of market failure, it may exacerbate a given public policy problem rather than cure it. For example, in certain kinds of markets such as payday lending and high-interest credit cards, firms sometimes compete not by providing superior prices or quality, but rather by attempting

to most effectively exploit their customers' psychological biases and imperfect willpower, inducing them to make commercial decisions that are against their objective or subjective personal and financial interests.⁶ Without consumer protection and other similar laws, increased competition in such markets threatens to lead to increased exploitation, making consumers (and other market participants) worse off.⁷

The second variable recognizes that competition almost invariably creates “losers” in addition to “winners,” and antitrust law does not account for these collateral injuries. For example, consumers can be injured by lawful competition when competition results in a monopoly owing to a “superior product, business acumen, or historic accident.”⁸ The law allows such monopolies to exploit consumers for the maximum possible profit on grounds that “the successful competitor, having been urged to compete, must not be turned upon when he wins.”⁹

Similarly, workers' jobs, and even their basic ability to subsist, can be put in peril when firms compete to innovate technologically or develop new business models that reduce demand for labor.¹⁰ As long as competing employers continue to meet their real demand for labor without artificially restraining or suppressing it, antitrust law affords workers no remedy. Likewise, small and independent businesses can be injured by competition. Many are put into bankruptcy or destroyed when their rivals lawfully achieve technological advancements or economies of scale that they cannot share or match.¹¹

“ Our methodology applies key variables that affect degrees of uncertainty in obtaining socially desirable deterrent and remedial relief through antitrust litigation—derived from core areas of policy agreement and disagreement regarding the goals of the antitrust laws. ”

B. HIDDEN GUIDANCE IN THE UNRESOLVED CONSUMER-WELFARE DEBATES

The three remaining uncertainty variables arise from disagreements regarding antitrust law's articulated consumer-welfare goal. The third uncertainty variable—the detectability of a wealth transfer—arises from disagreement over whether consumer welfare is served by an antitrust law devoted exclusively to stimulating economic efficiency, or by an antitrust law that also prevents forced wealth transfers to firms with market power.¹² Notwithstanding that this “efficiency vs. wealth transfer” debate remains unresolved among scholars, the terms of the debate make clear that an antitrust lawsuit can survive the preliminary stages of litigation provided the plaintiff can plausibly allege that the challenged conduct forces a wealth transfer to a firm with a market power. Uncertainty about the viability of a claim increases, however, to the extent that a forced wealth transfer is difficult to detect and therefore to plausibly allege.

The fourth uncertainty variable—the nature of the plaintiff’s allegations of an anticompetitive effect—arises from disagreement over the kinds of evidence that are and should be sufficient to prove antitrust violations. Competition is believed to create and increase pressure on businesses to charge lower prices, sell more products, buy more inputs, and pay higher wages (hereinafter “price/output effects”), as well as to innovate and bolster the quality, variety, service, and choice associated with their offerings (hereinafter “non-price effects”). As the AAI companion paper explains, an ongoing “price effects vs. non-price effects” debate teaches that claims premised solely on unquantified, non-price harms are more difficult for courts to assess, and in turn pose greater uncertainty, than claims premised on quantified price/output harms, or both.¹³

Claims of non-price and price/output harms each can be subject to proof problems owing to the absence of “but-for-world” evidence—that is, evidence of the hypothetical market outcome if the challenged conduct had not occurred. However, non-price harms often are comparatively more difficult for courts to assess because of the risk that consumers’ idiosyncratic preferences may introduce confusion. For example, whereas courts often can readily identify a harmful increase in the price charged to any group of consumers as an objective evidentiary fact, they may have more difficulty identifying a change in product quality as an objective degradation rather than a neutral adjustment or, perhaps in the eyes of one subset of consumers, even an improvement. Uncertainty therefore increases when claims are premised *solely* on allegations of unquantified, non-price effects.

The fifth uncertainty variable—the compatibility of any “incommensurable” competitive effects—arises from disagreement over whether antitrust law should and does protect only the final, end-purchasers in a supply chain, who buy products in output markets, or also the other trading partners of firms with market power, who may buy *or sell* products in input markets.¹⁴ Upstream claims on behalf of sellers and intermediate buyers can threaten to create welfare tradeoffs with end-consumers, and the risk is complicated when challenged conduct creates both non-price effects and price/output effects, instead of only one or the other. When non-price effects cannot be converted into quantifiable units of measurement, the two kinds of effects are necessarily incommensurable. The “end-purchaser welfare vs. trading-partner welfare” debate suggests that, in upstream claims, uncertainty increases or decreases depending on whether these incommensurable effects align or diverge. If they align, meaning the challenged conduct produces both kinds of effects, and both effects are harmful, then uncertainty is comparatively lower. If they diverge, meaning conduct has a harmful effect on one dimension of competition but a beneficial effect on the other, uncertainty is comparatively higher.

C. IMPLICATIONS OF UNCERTAINTY VARIABLES FOR DETERRENT AND REMEDIAL RELIEF

The first, second, and third variables have important implications for policymakers in assessing whether antitrust litigation should be expected to have a desirable deterrent effect in the current enforcement climate. If (1) the competitive process might exacerbate rather than cure a given problem owing to a market failure, (2) policymakers

have a specific goal of protecting vulnerable classes who may be threatened by lawful competition itself, or (3) there is a risk that any lost rivalry may not force a discernible wealth transfer from some vulnerable market participants to a firm with market power, then degrees of uncertainty in achieving socially desirable deterrence are comparatively higher. If none of these risks are present, then degrees of uncertainty in achieving desirable deterrence are comparatively lower.

All five uncertainty variables have important implications for policymakers in assessing whether antitrust litigation in today's environment should be expected to lead to a desirable, court-imposed remedy. The first three variables contribute to remedial uncertainty for the same reasons they contribute to deterrence uncertainty. That is, if deterrence does not serve policymakers' needs, a remedy should not be expected to do so either. And if the absence of a discernible forced wealth transfer casts doubt on a plaintiff's ability to survive the preliminary stages of litigation, it obviously casts doubt on the plaintiff's ability to survive the later stages of litigation as well.

The fourth and fifth variables provide additional guidance. If a plaintiff relies exclusively on qualitative evidence of a harmful non-price effect, then the plaintiff's ability to obtain a remedy is comparatively less certain. If the plaintiff relies on quantitative evidence of a price/output effect, or both, then the plaintiff's ability to obtain a remedy is comparatively more certain.¹⁵ Likewise, if the challenged conduct generates incommensurable non-price and price/output effects that diverge, then the plaintiff's ability to obtain a remedy is comparatively less certain. If the challenged conduct generates incommensurable non-price and price/output effects that align, then the plaintiff's ability to obtain a remedy is comparatively more certain.

In the sections that follow, we apply this framework to the eight public policy problems in the digital technology sector introduced in Section I. Each of the following sections: (1) describes a problem, (2) applies the key variables for obtaining deterrence or remedial relief to the problem, and (3) makes key findings and recommendations.

III. MISINFORMATION AND DISINFORMATION

The problem of false and misleading information online is likely familiar to most citizens. It “has spawned not only a public policy debate but also a broader national conversation about the integrity of the American democracy.”¹⁶ One peer-reviewed study of online news stories distributed on Twitter from 2006-2017 found that “[f]alsehood diffused significantly farther, faster, deeper, and more broadly than the truth in all categories of [online] information, and the effects were more pronounced for false political news than for false news about terrorism, natural disasters, science, urban legends, or financial information.”¹⁷ During the 2016 presidential election, Facebook, Google and Twitter confirmed to the Washington Post that Russian agents coordinated efforts to disrupt the American political process by spreading divisive messages over their platforms, and Russian influence reportedly reached 125 million users on Facebook alone.¹⁸

Meanwhile, a report commissioned by the Australian Competition and Consumer Commission (ACCC) found that digital-platform-based distribution of news has threatened the relationships, reach, and business models of legitimate news producers.¹⁹ And, survey evidence from the Reuters Institute shows that trust in the news media has fallen globally.²⁰

To address the role of large digital technology firms in the spread of misinformation and disinformation online, a hypothetical antitrust lawsuit seeking either deterrence or remedial relief would have to be premised on an expectation that the competitive process will help preserve viable business models for legitimate news producers and help ensure that citizens do not consume content “created or spread with intent to deceive” or “false content spread by those who may mistakenly believe it to be true.”²¹

“*Preference-shaping and addiction-based software design present the greatest challenges in obtaining effective deterrence, followed by misinformation and disinformation, viewpoint discrimination, and privacy intrusions, followed by self-preferencing, undemocratic market structures, and labor exploitation.*”

A. PRESERVING VIABLE BUSINESS MODELS FOR LEGITIMATE NEWS PRODUCERS

The need to preserve viable business models for legitimate news producers arises in the upstream market where news producers transact with news distributors. The role of large platforms or aggregators in the upstream market is typically to barter with news producers. The platforms or aggregators provide distribution services in exchange for access to news producers’ content. Alternatively, they may force such services upon news producers via lawful or unlawful content scraping.²² In the upstream market, a wealth transfer imposed by a powerful platform or aggregator therefore could be expected to manifest in the powerful firm providing lower quality news distribution services to news producers, since such firms could not pay news producers any less than they do currently for content.

The supply side of the upstream market, which is comprised of a wide variety of news producers, appears unconcentrated, and perhaps even atomized. Indeed, the sheer volume of news producers, if one counts both the legitimate and illegitimate outlets, has grown staggering.²³ The distribution side of the upstream market, by contrast, appears somewhat more concentrated, with large digital platforms and aggregators maintaining a significant presence.²⁴

Applying the relevant variables from AAI’s framework, an antitrust lawsuit against a large, platform-based news distributor would come with high levels of uncertainty in achieving

either deterrent or remedial relief, even assuming any single platform or aggregator has market power in news distribution. The first variable—the risk of market failure—highlights the challenges. In the downstream market, consumers have been shown to struggle to distinguish real news from fake news because of “information overload,” in which the volume and pace of delivered information becomes too high for users to reliably verify its accuracy.²⁵ Consequently, online news may have “credence-good” or “experience-good” qualities. That is, because of the information overload phenomenon, users may not know they have consumed false information from a news outlet until after they have consumed it, or they may never know.²⁶

“Policymakers should not rely on antitrust law alone to preserve the business models of legitimate news producers or ensure that citizens do not consume misinformation and disinformation. Other legal or regulatory protections should be deployed in tandem with antitrust law.”

On the supply side of the upstream market, so-called fake news producers therefore may be able to engage in “competition by deception,” facilitating the proliferation of problematic content rather than discouraging it.²⁷ Accordingly, an antitrust enforcement action focused on the upstream market, which would aim to improve the terms of barter between platforms and news producers, whether through deterrence or a remedy of some kind, could just as easily strengthen the business models of illegitimate news producers as legitimate news producers. For the competitive process to help protect the business models of legitimate news producers, such producers first must be able to induce willing consumers to switch away from rivals who disseminate misinformation and disinformation. Otherwise, antitrust relief would risk maintaining or even exacerbating the undesirable aspects of the status quo.

B. PREVENTING CITIZENS FROM UNKNOWINGLY CONSUMING FAKE NEWS

On the downstream, consumer-facing side of news markets, where large, dominant platforms or aggregators transact with readers, news distribution services likewise are bartered. The platforms or aggregators provide end users with access to news content in exchange for their attention and personal data rather than a monetary payment.²⁸ Consequently, a wealth transfer from a reader to a dominant platform or aggregator, if such a firm has the power to impose one, would be expected to manifest in the form of lower quality news distribution services or otherwise inferior terms of barter.²⁹ Although they may lack an economic incentive to do so, platforms or aggregators theoretically could also raise the price above zero by demanding monetary payments from users in addition to data and attention, much as some large news producers now do in their direct distribution channels that combine advertisements with pay-wall subscriptions.

For all of the reasons discussed above, the first uncertainty variable suggests that the prospect of effective deterrent or remedial relief again is highly uncertain. An antitrust lawsuit against a large platform would rely on the competitive process to improve the terms of barter on the consumer-facing side of news distribution markets. But given the risk of market failure owing to the product’s potential experience- or credence-good qualities, “there may be a considerable opportunity” for news distributors to transmit misinformation and disinformation and “competition may not be a viable response.”³⁰

The fourth uncertainty variable—the nature of evidentiary allegations of an anticompetitive effect—suggests further uncertainty associated with remedial relief. Because news distribution service on the consumer-facing side of news markets is currently bartered in exchange for attention and data, without any monetary payments, plaintiffs would have to rely solely on an anticompetitive non-price effect to establish harm—namely, lower-quality consumer news distribution services. And the effect likely would be measurable and provable solely using qualitative evidence of news content that is objectively false and misleading.³²

The fifth variable—the compatibility of any incommensurable competitive effects—suggests still further uncertainty in obtaining a remedy in the downstream market. To the extent harmful qualitative effects of platform-based news distribution are provable, they appear to move in an opposite direction than the quantitative effects: As the overall quality of news content appears to have declined, the overall quantity (counting both real and fake news) appears to have increased. Because these incommensurable effects appear to diverge, courts likely would struggle to craft an effective competition-restoring remedy even if a case based on qualitative harm could be won. To the extent the remedy would lead to higher quality news but less news content (or higher prices), the court may be uncertain whether, on balance, the competitive benefits of the remedy would outweigh the competitive costs relative to the status quo.

C. FINDINGS AND RECOMMENDATIONS

- 1. Deterrence Value: An antitrust enforcer’s prospects of achieving beneficial deterrence against the spread of online misinformation and disinformation are subject to high degrees of uncertainty under current law.** On both the consumer and producer sides of the market, increased competition may be ineffectual in slowing the spread of false and misleading news, and may even exacerbate it, owing to the risk of market failure (Variable 1).
- 2. Remedial Value: The prospects of achieving a beneficial remedy also are subject to high degrees of uncertainty.** In addition to the threat of market failure owing to information overload (Variable 1), an antitrust challenge on either the consumer or producer side of the market likely would have to rely solely on qualitative evidence of a non-price effect to survive beyond the preliminary stages of litigation (Variable 4). Moreover, non-price effects and price/output effects likely are incommensurable and may be divergent (Variable 5).

- 3. Recommendations:** Policymakers should recognize that antitrust litigation may not be sufficient if they wish to help preserve the business models of legitimate news producers or ensure that citizens do not consume misinformation and disinformation. Other legal or regulatory protections, including to facilitate consumer differentiation between real and fake news, should be deployed in tandem with antitrust litigation if policymakers wish to prevent the proliferation of problematic news content.

IV. SELF-PREFERENCING

A paradox for many would-be internet entrepreneurs is that platform commerce can make new entry seem both possible and impossible at the same time. While starting a small internet business on a platform can offer the incentive-creating promise of little-to-no marginal, transaction, and distribution costs,³³ it comes with the incentive-destroying promise that the platform will elect to supplant any new business in favor of a proprietary offering whenever doing so becomes sufficiently profitable.³⁴ The various methods by which dominant platforms or aggregators can steer users toward their proprietary or preferred products are collectively described as “self-preferencing.”

In 2012, the Federal Trade Commission investigated whether “Google unfairly promoted its own vertical properties through changes in its search results page, such as the introduction of the ‘Universal Search’ box, which prominently displayed Google vertical search results in response to certain types of queries.”³⁵ In November 2020, the European Commission launched an investigation into whether Amazon “might artificially favour its own retail offers and offers of marketplace sellers that use Amazon’s logistics and delivery services” in calibrating which sellers appear in Amazon’s ‘Buy Box’ and are eligible to participate in its Prime loyalty program.³⁶

Meanwhile, it may be no coincidence that reports of self-preferential behavior have been accompanied by a decline in firm start-up rates in the United States.³⁷ Venture-capital investors report anecdotally that tech start-ups seeking seed funding have been relegated to pitching themselves as potential acquisition targets of dominant tech platforms and not as competitors.³⁸

To address undesirable self-preferencing by large digital technology firms, an antitrust lawsuit seeking either deterrence or remedial relief would rely on the competitive process to reverse the stultifying impact of self-preferencing on the entry and innovation incentives of entrepreneurs and small and independent businesses, as well as on the diversity, choice, and innovation that such businesses would otherwise provide to consumers.³⁹

A. THE EFFECT OF SELF-PREFERENCING ON ENTRY AND GROWTH INCENTIVES, CONSUMER CHOICE, AND INNOVATION

Self-preferencing implicates a recurring challenge in applying antitrust law to suspicious conduct by dominant, vertically integrated firms in general. The law can directly address

exclusionary behavior by dominant firms that destroys smaller, unintegrated rivals. However, the current law permits such firms to compete with their rivals, even when they “compete” by exploiting an overwhelming advantage. Courts may or may not struggle to tell the difference from case to case.

Accordingly, the third variable—the detectability of a forced wealth transfer—suggests the likelihood that antitrust litigation will effectively deter socially undesirable self-preferencing will vary according to the facts. Consider the Amazon behavior currently under investigation by the European Commission. If the evidence suggests that Amazon calibrates its Prime program and Buy Box determinations to help its consumer trading partners locate the products that best match their needs, uncertainty in achieving deterrence benefits through an antitrust claim may be comparatively high, notwithstanding that the conduct harms third-party sellers. However, if the evidence suggests Amazon uses these tools to obscure more desirable products and foist inferior products on consumers, then, all else equal, uncertainty in achieving deterrence benefits through an antitrust claim would be comparatively low.

“Other legal or regulatory protections should be used together with antitrust law to eliminate all or most platform “self-preferencing,” or to protect the entry and innovation incentives of third-party sellers on platforms, and the benefits such sellers deliver to consumers.”

It seems obvious that some degree of rivalry is being eliminated on the Amazon platform if certain businesses are rendered automatically ineligible for Prime participation or Buy Box determinations regardless of their prices and quality. But, to make a finding that Amazon’s self-preferencing serves as illegal exclusion rather than lawful competition, some courts may require a plausible showing that the affected trading partners in the affected markets, who in this example are consumers, experienced the self-preferencing as unwelcome coercion rather than welcome curation. In other words, rightly or wrongly, the detectability of a wealth transfer, depending on the court, may turn on whether consumers can plausibly allege they were denied access to alternative choices or innovations they would have demonstrably valued.⁴⁰

The fourth variable—the nature of the allegations of an anticompetitive effect—suggests degrees of uncertainty in obtaining a remedy will vary as well. In some instances, an antitrust plaintiff may be required to rely solely on an unquantified, non-price harm, namely that innovative, entrepreneurial third parties were discouraged from entering or growing in the affected markets, because they were not permitted to compete. In such cases, the hypothetical “but-for world” absent the self-preferencing cannot be known, and this proof problem would be compounded if the court requires plaintiffs to somehow demonstrate that consumers would have valued the choices they were denied as a result of the platform’s or aggregator’s self-preferencing.⁴¹ In these cases, at summary

judgment or trial, courts applying current standards may have difficulty assessing whether the injured businesses would have generated the kind of rivalry that antitrust law protects.⁴²

However, in other cases, this challenge will be more easily overcome, because the showing of the harmful non-price effects of self-preferencing can be buttressed by harmful price/output effects. One empirical study, for example, found “many instances” where “Amazon may present itself as the default seller even when the same product is offered at lower cost (i.e., product price plus shipping cost), with a comparable shipping speed by third-party sellers with high ratings.”⁴³ In such cases, Amazon’s self-preferencing behavior, if Amazon has market power, would seem to threaten both an anticompetitive non-price effect and price effect. Thus, uncertainty in achieving a desirable remedy through an antitrust claim may be comparatively high or low depending on the facts.

The fifth variable—the compatibility of any incommensurable competitive effects—also suggests that degrees of uncertainty in obtaining a remedy will vary. As the preceding example has already shown, self-preferencing sometimes can result in harmful non-price effects and price effects that align. In these cases, any uncertainty in obtaining a competition-restoring remedy remains comparatively low. In other cases, however, self-preferencing may result in non-price and price effects that diverge. For example, the same, aforementioned empirical study found that Amazon’s entry into retail markets on its own platform can lead entrepreneurs and small businesses to stop pursuing growth, yet may also lead to increased product demand and lower shipping costs for the affected products.⁴⁴ In these cases, Amazon’s behavior may have an anticompetitive non-price effect, in the form of diminished third-party entry and innovation incentives, but at the same time have a *procompetitive* price/output effect, by increasing demand.⁴⁵ In these cases, enforcers and courts likely would struggle to craft an effective remedy, even if a case premised on the harmful non-price effect could be won.

The FTC’s 2013 investigation into Google’s self-preferencing conduct illustrates the risks of remedial failure in the context of self-preferencing. After a lengthy investigation, the parties settled prior to litigation, with Google agreeing to two voluntary behavioral commitments to treat third-party platform participants more fairly. Commissioner Rosch criticized the investigation for having “promised an elephant and brought forth a couple of mice.”⁴⁶ A European Commission investigation of similar conduct, which culminated in a successfully litigated case and large fine, likewise has been criticized for failing to actually restore competition.⁴⁷

B. FINDINGS AND RECOMMENDATIONS

- 1. Deterrence Value: An antitrust enforcer’s prospects of achieving beneficial deterrence against self-preferencing likely vary across product markets.** At preliminary stages of litigation, whether any given judge would view preference-shaping as illegal exclusion rather than lawful competition may depend on whether it results in a detectable wealth transfer that can be supported by plausible evidentiary allegations in the affected product market (Variable 3).

- 2. Remedial Value: The prospects of achieving a beneficial remedy likely also vary across product markets.** Plaintiffs sometimes may have to rely solely on qualitative evidence that third-party platform participants experienced diminished entry and growth incentives or that users were denied access to choices they would have valued. However, plaintiffs’ qualitative evidence of non-price effects sometimes may be bolstered by compatible quantitative evidence of higher prices or decreased output. (Variable 4). Likewise, the non-price effects and price/output effects caused by self-preferencing may alternately diverge or align, depending on the product market (Variable 5).
- 3. Recommendations:** Policymakers should recognize that antitrust litigation may not always serve to protect the entry and innovation incentives of third-party sellers on platforms, and the benefits such sellers deliver to consumers. Other legal or regulatory protections, including possible amendment of the antitrust laws, should be used in tandem with litigation under existing antitrust law if policymakers wish to eliminate all or most platform self-preferencing.

V. PREFERENCE-SHAPING AND BEHAVIOR MODIFICATION

Technology that effectively employs insights from human behavioral psychology to target the sale of commercial products and services to consumers (and related online advertising inventory sold to businesses) has been said to be “[a]s significant a threat to human nature in the twenty-first century as industrial capitalism was to the natural world in the nineteenth and twentieth.”⁴⁸

Using predictive computer algorithms that are personalized and tailored to each individual user, platforms often are able to shape users’ preferences by curating users’ commercial options and opportunistically presenting them with a narrowed range of goods and services based on preferences they expressed in the past. The result is that a consumer’s expression of her commercial “wants” may not be “the result of a ‘process of individuation’ mastered by the consumer in question but rather the outcome of a fabricated informational sphere, built in a constant feedback loop,” which is created and managed by a large, commercially motivated platform.⁴⁹

Business experts have expressed concern that algorithmic advancements rooted in data collection and analytics, coupled with the pervasive presence of connected products in daily life, have enabled dominant technology firms to use problematic strategies in selling both products and advertising online. The concern is that such offerings are not only highly targeted based on data-driven predictions about human behavior, but that platforms and their advertising partners can affirmatively “nudge, coax, tune, and herd behavior toward profitable outcomes.”⁵⁰

Meanwhile, ethicists see fundamental flaws in a system where powerful firms “finance contact between people by charging third parties who wish to influence those who are connecting.”⁵¹ They worry that platform intermediation, coupled with the power to shape not only what a user sees, but what a user *wants*, portends “an internet — and, indeed, a society — built on injected manipulation instead of consensual discourse.”⁵²

To address undesirable preference-shaping by large digital technology firms, an antitrust lawsuit seeking either deterrence or remedial relief would rely on the competitive process to help consumers regain access to the online information that they do not know they are missing, and that they may otherwise want or need to know.

“Protecting consumers and other market participants from socially undesirable preference-shaping, or algorithmic manipulations that limit the scope of their exposure to important information, will require antitrust to work together with other legal and regulatory protections.”

A. THE EFFECT OF PREFERENCE-SHAPING ON CONSUMER SELF-SATISFACTION

The principal challenge that preference-shaping poses for antitrust law is that “[t]he algorithm-induced shaping of consumer wants undermines the basic assumption of microeconomics, namely that efficiency is based on the optimal satisfaction of individual preferences.”⁵³ When the seller has manipulated or shaped the buyer’s preferences, it is no longer clear that a “voluntary” sales transaction creates beneficial welfare effects for both parties. The problem is especially acute when the platform itself is the seller, but it persists in the context of third-party sales. The platform remains a self-interested actor insofar as a “successful” sale of a third-party product increases the value of the platform’s online advertising inventory and other marketplace services.⁵⁴

The first and third variables—the risk of market failure and the detectability of a forced wealth transfer—raise serious questions as to whether antitrust litigation is likely to deter socially undesirable preference-shaping. Because preference-shaping calls basic microeconomic assumptions into question, it presents a unique challenge in alleging causation. The challenge is that it may be difficult to attribute *any* kind of competitive effect, whether harmful or beneficial, to a shaped preference rather than an authentic preference. If output decreases or increases in a market in which a platform with market power uses an algorithm to shape users’ preferences, how would antitrust authorities know whether to attribute the change in demand to the shaped preference rather than an authentic preference? Even if it could do so for one user, how could it do so for all users in the affected market? An antitrust challenge would have to overcome the litigation hurdle of plausibly alleging evidence that would show a harmful non-price effect or price/output effect that is actually attributable to preference shaping.

The fourth variable—the nature of the allegations of an anticompetitive effect—further suggests that obtaining a remedy is subject to still further uncertainty. In a sense, preference-shaping is similar to self-preferencing. An antitrust claim challenging either practice sometimes will have to rely solely on proof of a harmful non-price effect, which likely depends on an imaginary, but-for world absent the manipulation—a world in which individual consumer preferences may vary.⁵⁵ But with self-preferencing, this challenge likely can be overcome if the harmful non-price effects of the challenged conduct are buttressed by harmful price/output effects. With preference-shaping, the causation challenge can make it difficult for courts to assess not only allegations of a harmful non-price effect at summary judgment or trial, but also a harmful price/output effect.

The fifth variable—the compatibility of any incommensurable competitive effects—also suggests high degrees of uncertainty in obtaining a remedy. Like self-preferencing, preference-shaping can cause non-price effects and price/output effects that alternatively diverge or align, depending on the facts and the affected markets. But the causation challenge, i.e. the potential difficulty locating evidence that attributes either kind of effect to a shaped preference rather than an authentic preference, again creates additional hurdles. If enforcers and courts cannot *know* whether non-price and price/output effects diverge or align, they may be just as hesitant to impose a remedy as they would be if they knew that the two kinds of effects diverged.

Finally, preference-shaping also is distinguishable in that it poses societal risks that are as great or greater in non-commercial contexts as in commercial contexts. Unlike self-preferencing, which usually or always implicates a platform's ability to profit by promoting its own or its partners' products, preference-shaping can occur outside the context of a product sale or the placement of an online advertisement. Whether, for example, in the return of an organic search result from a search engine, or the order and prioritization of friend posts by a social media news feed, preference-shaping can “fundamentally alter[] the way we encounter ideas and information.”⁵⁶ As one author has put it, preference-shaping “confines us to our own information neighborhood, unable to see or explore the rest of the enormous world of possibilities that exist online.”⁵⁷ Apart from how this degrades commercial experiences, it also encroaches on non-commercial spheres of life by distorting a user's exposure to, for example, scientific information or artistic and other works.⁵⁸

B. FINDINGS AND RECOMMENDATIONS

- 1. Deterrence Value: An antitrust enforcer's prospects of achieving beneficial deterrence against preference-shaping are subject to high degrees of uncertainty under current law.** The difficulty in locating evidence that causally attributes any kind of competitive effect to a shaped preference rather than an authentic preference may present significant challenges for plaintiffs in surviving the preliminary stages of litigation (Variables 1, 3).
- 2. Remedial Value: The prospects of achieving a beneficial remedy also are subject to high degrees of uncertainty.** In addition to the risk that market failure introduces intractable causation challenges at preliminary stages

of litigation (Variable 1), the same causation challenges likely make it difficult for courts to assess allegations of either a harmful non-price effect or price/output effect at summary judgment or trial (Variable 4). Moreover, while non-price effects and price/output effects could alternatively diverge or align in theory, enforcers and courts would likely hesitate to impose a remedy if they are unable to determine whether they diverge or align in practice (Variable 5).

- 3. Recommendations:** Policymakers should recognize that antitrust litigation often may not offer a viable pathway to protecting consumers and other market participants from algorithmic manipulations that limit the scope of their exposure to important information. Other legal or regulatory protections, including to address preference-shaping in non-commercial spheres of life, should be deployed in tandem with antitrust law if policymakers wish to meaningfully address socially undesirable preference-shaping.

VI. THE USE OF ADDICTION SCIENCE IN SOFTWARE DESIGN

An abundance of psychology studies and other social science evidence shows that many human beings are experiencing addictive outcomes related to their technology use. “Pathological internet use,” an impulse-control disorder in which individuals experience a debilitating drive to continue internet usage to the point that they are “unable to accomplish regular activities due to their inability to disconnect,” is estimated to affect 210 million people.⁵⁹ And, social media use in particular has been shown to correlate positively with symptoms of depression, to be associated with lower self-esteem, greater loneliness, and body image issues in children, and to be significantly correlated with more depressive symptoms and risk for suicide-related outcomes.⁶⁰

Studies have shown that certain platform products “may not only create recognized forms of addiction but also physical alterations of the brain, embellishing the severity of one’s addiction.”⁶¹ Meanwhile, many of today’s dominant digital technology firms were pioneers in using addiction science to steer users into spending excessive time on their platforms.⁶² And because their online advertising inventory continues to be monetizable primarily through user attention,⁶³ they continue to seek to maximize user attention on their platforms.⁶⁴

To address the socially undesirable use of addiction science in software design, an antitrust lawsuit seeking either deterrence or remedial relief would rely on the competitive process to induce platforms and other product developers to attract demand using the merits of their products rather than by exploiting users’ psychological weaknesses.

A. THE DOUBLE-EDGED SWORD OF ADDICTIVE SOFTWARE PRODUCTS

Like preference-shaping, the use of addiction science to attract and keep users engaged on platforms raises questions about whether “voluntary” transactions are welfare enhancing. It thus challenges core assumptions of neoclassical economic models that have shaped modern antitrust law. “[A]ntitrust’s economic theories for the past thirty years have largely assumed that rational profit-maximizing market participants have willpower.”⁶⁵

As Richard Thaler and Cass Sunstein have recounted, “[s]elf control issues” can affect market behavior “when choices and their consequences are separated in time.”⁶⁶ Two examples they offer are “investment goods,” defined as goods in which the cost is borne immediately but the benefits are delayed (such as exercise, flossing and dieting), and “sinful goods,” where “we get the pleasure now and suffer the consequences later” (such as smoking, alcohol, and chocolate doughnuts).⁶⁷ Software designed using addiction science threatens to imbue large swaths of online activity with the characteristics of sinful goods.

“*The problem of addictive software-product designs will require antitrust to work together with other regulatory protections, such as prohibiting such designs or promoting effective transparency and safety.*”

The first and third variables—the risk of market failure and the detectability of a forced wealth transfer—suggest it may be difficult to deter addictive software-product designs using antitrust litigation. As with preference-shaping, the use of addiction science in software designs presents unique causation challenges because it calls basic microeconomic assumptions into question. While it is easy to suspect a harmful non-price effect insofar as users in the throws of addiction can be reliably understood to be having a lower-quality experience than they otherwise would, whether and when a given user’s demand transitions from authentic to addiction-driven is not easily discernible. Moreover, the answer may vary from user to user. Causation challenges and proof problems therefore may make it difficult for plaintiffs to plausibly allege either a harmful non-price effect or price/output effect.

The fourth variable—the nature of the allegations of an anticompetitive effect—suggests it also may be difficult to obtain a remedy. Again, the same causation challenges and proof problems that may make it difficult for plaintiffs to plausibly allege a harmful price/output or non-price effect would apply at summary judgment and trial, where such a causal effect has to be proven.

The fifth variable—the compatibility of any incommensurable competitive effect—also suggests uncertainty in obtaining a remedy. At first blush, one might expect the non-price

and price/output effects of addiction-driven software products to reliably diverge. As the behavior of consumers who are physically and psychologically beholden to illegal narcotics can show, addictive qualities can drastically increase a consumer's demand for a product while drastically reducing the consumer's satisfaction with it.⁶⁸ However, Sunstein and Thaler suggest that it is possible to capitalize on failures of human self control to steer citizens toward default choices that are more likely to increase their welfare than alternative choices, perhaps suggesting that addiction science could be used as a means to altruistic rather than insidious ends.⁶⁹ But regardless, as with preference-shaping, causation challenges raise questions about whether enforcers and courts can confidently assess whether non-price and price/output effects diverge or align. And they may be hesitant to impose a remedy accordingly.

Finally, addiction-based software designs also have in common with preference-shaping that they can pose societal risks in non-commercial contexts as well as commercial contexts. A user can be susceptible to the ill-effects of pathological internet use not only when shopping for products or being served online advertisements, but also when consuming social and entertainment content, such as games, pictures, videos, and friend posts.

B. FINDINGS AND RECOMMENDATIONS

- 1. Deterrence Value: An antitrust enforcer's prospects of achieving beneficial deterrence against addiction-driven product designs are subject to high degrees of uncertainty under current law.** The difficulty in causally attributing any kind of competitive effect to an addiction-driven preference rather than an authentic preference may present significant challenges for plaintiffs in surviving the preliminary stages of litigation in some jurisdictions (Variables 1, 3).
- 2. Remedial Value: The prospects of achieving a beneficial remedy also are subject to high degrees of uncertainty.** In addition to the risk that market failure introduces intractable causation challenges at preliminary stages of litigation (Variables 1, 3), the same causation challenges likely would make it difficult for courts to assess allegations of either a harmful non-price effect or price/output effect at summary judgment or trial (Variable 4). Moreover, while non-price effects and price/output effects could alternatively diverge or align in theory, enforcers and courts may struggle to determine whether they diverge or align in practice, leading them to hesitate in imposing a remedy accordingly (Variable 5).
- 3. Recommendations:** Policymakers should recognize that initiating antitrust litigation may not always serve to protect consumers and other market participants from the use of addiction science in software designs. Other legal or regulatory protections, perhaps to prohibit such designs or to promote effective transparency and safety in their use, should be deployed in tandem with antitrust law if policymakers wish to protect users from addictive outcomes in their technology use.

VII. FREE SPEECH AND VIEWPOINT DISCRIMINATION

Commentators, including politically conservative commentators in particular, have voiced concerns that “[p]ublic discourse, a full-throated concept of free speech, and a fully informed electorate are at risk” because a handful of digital technology firms “decide what news, information, and viewpoints America ought to share or read.”⁷⁰ Large technology firms are “deeply invested” private stakeholders who effectively wield “the enormous cultural power” to “set and enforce the boundaries of appropriate public speech,” and they do so “behind closed doors, making it difficult for anyone else to inspect or challenge their decisions.”⁷¹ Meanwhile, the firms disclaim any liability for content moderation decisions on grounds that such decisions constitute protected speech itself.⁷² And, with little accountability, following profit motives that lead them to steer users into “filter bubbles” or toward overly salacious, error-prone, and conspiratorial information flows,⁷³ the firms have helped shape a public discourse that strike many as not only more polarized and misinformed but also lopsided and censorial.

To address socially undesirable viewpoint discrimination online, an antitrust lawsuit seeking either deterrence or remedial relief would rely on the competitive process to discourage platforms from creating algorithms that generate polarized, feedback-driven information flows and to encourage platforms to begin prioritizing user exposure to diverse content.

A. ALGORITHMS AND CONTENT MODERATION POLICES THAT CREATE UNHEALTHY INFORMATION DIETS

The societal concern with viewpoint discrimination by dominant platforms is rooted in the same risks as the societal concerns with preference-shaping and online misinformation and disinformation: impoverished access to ideas and information. Informational feedback loops on platforms threaten to amplify majority views held by platform participants and marginalize minority views. Moreover, platform content moderation policies, whether intentionally or unintentionally, can have the effect of stymieing certain viewpoints in relation to others.⁷⁴ Injuries are threatened both to those who hold minority views and to the other platform participants who value exposure to diverse thoughts and opinions.

The second variable—welfare tradeoffs caused by lawful competition—suggests degrees of uncertainty in using antitrust litigation to deter undesirable viewpoint discrimination may be high. Most immediately, viewpoint discrimination can occur as a consequence of competition itself, not solely as a consequence of an anticompetitive restraint. On the one hand, a diversity of market participants is often a hallmark, and a byproduct, of competitively healthy market ecosystems.⁷⁵ But on the other hand, lawful competition can eliminate diversity when the competitive process leads to concentration. And lawful competition often does lead to concentration in network industries that are susceptible to “tipping” to a single firm. Indeed, that is why the Federal Communications Commission regulates telecommunications networks under a public interest standard rather than solely under a competition standard.⁷⁶

“Policymakers should not rely on antitrust law alone if they wish to encourage users to gain exposure to more diverse content or discourage platform algorithms and content-moderation policies that generate polarization.”

Moreover, even where competition exists, it can lead to information silos, where multiple networks exist but none provides a balanced diversity of views. For example, after Twitter suspended President Trump’s account for inciting a right-wing mob that attacked the U.S. Capitol on January 6, 2021, President Trump reportedly sought an ideologically sympathetic alternative to Twitter rather than appealing for more solicitude for right-wing views within the platform.⁷⁷ Multiple, competing silos can provide a valuable diversity of viewpoints if users multi-home, but not if users gravitate to a single network. In the latter instance, competition could actually exacerbate polarization, leading to the paradox of increased user access to diverse viewpoints but less actual exposure to them.

The third variable—the detectability of a forced wealth transfer—also raises questions about the efficacy of achieving deterrence through litigation. As Averitt & Lande explain, “variety of supply is generally beneficial, and competitive markets typically offer this variety in response to consumer demand.”⁷⁸ But “[t]his does not mean simply that more choices are better.”⁷⁹ Indeed, “[r]esearch shows that additional choice tends to lead to increased satisfaction only up to a point,” and that “too much choice can be detrimental to consumers.”⁸⁰ The same may hold true of viewpoints. Up to a certain point, viewpoint discrimination may not only fail to harm a platform’s trading partners, but it could affirmatively benefit them. It may be unclear, accordingly, whether platforms’ algorithmic amplification of selected viewpoints, or their content-moderation decisions, force a wealth transfer from trading partners from case to case.

The fourth variable—the nature of the allegations of an anticompetitive effect—suggest a risk of uncertainty in obtaining a remedy. The harm caused by viewpoint discrimination is qualitative rather than quantitative by definition. A plaintiff therefore would have to rely solely on evidentiary allegations of an anticompetitive non-price effect. And when a given viewpoint is suppressed, whether through algorithmic curation or a content-moderation policy, authorities likely will have difficulty detecting whether the suppression was contrary to, or consistent with, consumer demand.⁸¹

The fifth variable—the compatibility of any incommensurable competitive effects—adds to the risk of uncertainty. Antitrust enforcers and courts view antitrust and free speech concerns as presenting “a classic incommensurability problem.”⁸² And, the non-price and price/output effects of viewpoint discrimination may alternately diverge or align. Measured quantitatively, censorial actions will reduce customer choices. But measured qualitatively, they might improve, diminish, or have a neutral effect on customer satisfaction. Courts and enforcers likely would hesitate to impose a remedy if increasing

the quantity of available viewpoints would decrease the quality of user information flows, or vice versa, for fear of weighing incommensurable values incorrectly. Moreover, if they are unable to determine whether non-price and price/output effects align or diverge, they would likely hesitate to impose a remedy for that independent reason as well.

B. FINDINGS AND RECOMMENDATIONS

- 1. Deterrence Value: An antitrust enforcer's prospects of achieving beneficial deterrence against socially undesirable viewpoint discrimination are subject to high degrees of uncertainty under current law.** Viewpoint discrimination not only may be caused by competition itself, but it also may occur in spite of competition (Variable 2).
- 2. Remedial Value: The prospects of a beneficial remedy also are subject to high degrees of uncertainty.** In addition to the risk that increased competition will not serve policymakers' goals (Variable 2), an antitrust challenge alleging injury from viewpoint discrimination by definition would have to rely solely on qualitative evidence of a non-price effect to prevail at later stages of litigation (Variable 4). Moreover, the non-price effects and price/output effects of viewpoint-limiting conduct likely are incommensurable and enforcers and courts may struggle to determine whether the effects diverge or align (Variable 5).
- 3. Recommendations:** Policymakers should recognize that antitrust litigation may not serve to discourage platform algorithms and content-moderation policies that generate polarization or encourage users to gain exposure to more diverse content. Other legal or regulatory protections should be deployed in tandem with antitrust law if policymakers wish to meaningfully address the problem of viewpoint discrimination and free-speech suppression online.

VIII. PRIVACY INTRUSIONS AND DATA BREACHES

Modern business models predicated on making uniquely accurate predictions about human behavior (or affirmatively shaping it) are made possible by unprecedented advancements in data collection coupled with newly sophisticated methods of data analysis. The essential inputs into “surveillance capitalism”⁸³ are personalized facts about human beings. These include not only relatively mundane facts regarding retail and entertainment preferences but also very personal and sensitive facts about, for example, legal and medical needs or deep-seated fears and vulnerabilities. And with the ongoing encroachment of connected devices into the inner sanctums of home and family life, “personal boundary controls,” which are believed to be essential to psychological health and personal development, have been eroding.⁸⁴

Meanwhile, in 2019, the Federal Trade Commission imposed a record-breaking \$5 billion fine against Facebook for “subvert[ing] users’ privacy choices to serve its own business interests.”⁸⁵ Facebook allegedly deceived users into sharing sensitive data with third-party

app developers “that could be used for identity theft, phishing, fraud, and other harmful purposes.”⁸⁶ The same week, the FTC unanimously voted out a complaint against Cambridge Analytica for deceptively harvesting the data of 50-65 million un-consenting “friends” of Facebook users, which the app developer extracted in order to sell voter profiling, microtargeting, and other marketing services to U.S. political campaigns and other clients.⁸⁷

These were not isolated incidents. Data breaches reportedly were up 33% economy wide in 2019, with exposures of “[p]assport numbers, medical records, bank account details, social media credentials, Social Security numbers” and other sensitive data sending “millions of people into frenzied lockdown.”⁸⁸

To address the problem of privacy intrusions and data breaches, an antitrust lawsuit seeking either deterrence or remedial relief would rely on the competitive process to prevent or redress a multiplicity of privacy harms. When personal and sensitive data is collected or appropriated involuntarily or left insufficiently protected from fraud, the privacy harms can range from subjective “mental pain and distress” to objectively “adverse actions against a person.”⁸⁹ The challenge for antitrust law lies in understanding the relationship between privacy and the competitive process.

“An antitrust lawsuit seeking deterrence or remedial relief would rely on the competitive process to prevent or redress a multiplicity of privacy harms but the challenge lies in the poorly understood relationship between privacy and the competitive process.”

A. UNPREDICTABLE DEMAND RESPONSES TO INTRUSIVE PRIVACY PRACTICES

Whereas many of the societal problems discussed in this White Paper focus on ensuring access to important information, privacy intrusions and data breaches implicate the protection of important information. The first variable—the threat of market failure—suggests antitrust litigation may sometimes struggle to deter intrusive privacy practices. It seems clear that firms sometimes *do* compete along privacy dimensions, in ways that appear to be output increasing and have non-price benefits. DuckDuckGo, for example, has managed to launch and sustain a viable search engine principally by distinguishing itself from Google through its less intrusive data-collection policies. This approach has provided a different search-engine choice that some users clearly value.⁹⁰ Numerous other examples of choice-increasing privacy competition also abound.⁹¹

Yet, consumer demand sometimes fails to respond to privacy competition. For example, in 2012, when Google announced more invasive privacy policies that would combine personal data across its YouTube, Maps, Calendar, Gmail and Search properties, and in 2013, when whistleblower Edward Snowden revealed that an NSA surveillance program

relied on data from Google and Bing but not DuckDuckGo, there was no discernible uptick in DuckDuckGo search traffic.⁹² Numerous other examples of consumers failing to switch in response to privacy degradations, despite having options, also abound.⁹³ And, empirical studies have replicated this apparent “privacy paradox.”⁹⁴

Unpredictable demand responses to privacy competition online could have any number of explanations. One possible explanation could be similar to that of “information overload” in the context of fake news.⁹⁵ Whereas information overload can make it too difficult or impractical for consumers to switch their news consumption habits in accordance with their preferences for accuracy, “data overload” may make it too difficult or impractical for consumers to switch their online social and commercial habits in accordance with their preferences for privacy.

Alternatively, similar to how addictive software design may imbue large swaths of online activity with the characteristics of “sinful goods,” platform products may imbue careful online privacy practices with the characteristics of “investment goods,” testing users’ self control.⁹⁶ It is also possible that many users are unaware that their privacy is being encroached upon until after they become locked into using intrusive platform products. Or, if the intrusions remain hidden from view and users do not parse the onerous fine print of privacy policies, they may never know.⁹⁷

Relatedly, the third variable—the detectability of a forced wealth transfer—also suggests higher degrees of uncertainty in deterring intrusive privacy practices through antitrust litigation. As with free speech limitations and viewpoint discrimination on platforms, intrusive data collection practices may not only fail to harm a platform’s trading partners in some instances, but it could affirmatively benefit them. For example, it is possible that the explanation for consumer failure to switch from Google to DuckDuckGo in 2012 or 2013 owes to a preference for data-driven search results over privacy-protective search results for many or most queries. It may be unclear, accordingly, whether intrusive privacy practices lead to a forced wealth transfer from trading partners from case to case.⁹⁸

The fourth and fifth variables—the nature of the allegations of an anticompetitive effect, and the compatibility of any incommensurable competitive effects—suggest an antitrust remedy for intrusive privacy practices may also be uncertain. Diminished privacy by definition is a non-price effect and often will be measurable and provable using only qualitative evidence.⁹⁹ As with preference-shaping and addiction-based product designs, but-for-world proof problems, idiosyncratic user preferences, and uncertain causation can render plausible claims more difficult for courts to assess at summary judgment and trial. Likewise, as with preference-shaping and viewpoint discrimination, they may often cause output effects and non-price effects that alternately diverge or align, but with added remedial challenges because of uncertain causation.

B. UNPREDICTABLE DEMAND RESPONSES TO DATA BREACHES

The challenge of unpredictable demand responses is not limited to intrusive data collection practices; it applies equally to data protection policies. The first variable therefore suggests that degrees of uncertainty in deterring data breaches through antitrust lawsuits likewise are high. Firms clearly compete in providing data security.

“The greatest challenges in obtaining an effective remedy arise in preference-shaping, addiction-based software design, misinformation and disinformation, viewpoint discrimination, and privacy intrusions. Comparatively smaller challenges may arise in the context of self-preferencing, undemocratic market structures, and labor exploitation.”

For example, after the office superstore Staples was victimized by a massive retail data breach caused by malware believed to be uploaded through point-of-sale terminals at its retail locations, both Staples and Office Depot emphasized their prioritization of data security in marketing literature to their most important business-to-business customers.¹⁰⁰ According to surveys after the Cambridge Analytica scandal, many Facebook users reportedly responded by deleting the app.¹⁰¹

Yet, firms have independent incentives to invest in high cyber security standards for reasons that are unrelated to market competition.¹⁰² And, there is little evidence that data breaches are more common in concentrated markets than competitive markets, which one might expect if lax data security were a byproduct of diminished rivalry. On the contrary, many data breaches target smaller businesses rather than dominant firms.¹⁰³

Moreover, Wall Street apparently does not always punish firms for data breaches. One study of 28 breached companies listed on the New York Stock Exchange showed that, in the immediate aftermath of a breach, share prices fell 7.27% on average and underperformed the Nasdaq by -4.18%. However, six months after the breach the companies actually performed better than they did in the six months prior.¹⁰⁴ Indeed, after Facebook shares fell \$134 billion in March 2018 following the Cambridge Analytica scandal, the shares fully recouped their value by May of the same year.¹⁰⁵

While market power, and the absence of choice, could explain the consumer and investor failure to meaningfully punish Facebook, it does not explain the failure to punish many other firms that failed to protect their users' sensitive, private data. Wall Street's response, or lack thereof, to data breaches could be explainable if investors recognize that any number of these explanations, or others, reliably predict consumer failure to switch products, or to switch inconsistently, in response to privacy competition online.

The fourth and fifth variables—the nature of the allegations of an anticompetitive effect and the compatibility of any incommensurable effects—suggest added uncertainty in obtaining an antitrust remedy for data breaches. Again, diminished privacy is a qualitative, non-price effect. And the same but-for-world proof problems, idiosyncratic user preferences, and uncertain-causation concerns discussed previously would apply.

C. FINDINGS AND RECOMMENDATIONS

- 1. Deterrence Value: An antitrust enforcer's prospects of achieving beneficial deterrence against intrusive privacy practices and lax data security are subject to high degrees of uncertainty under current law.** Depending on the facts, increased competition may not lead to better privacy practices because demand responses to privacy sometimes can be unpredictable (Variable 1). Moreover, intrusive privacy practices may not force a wealth transfer in some circumstances (Variable 3).
- 2. Remedial Value: The prospects of a beneficial remedy also are uncertain.** In addition to the risk that increased competition may not generate better privacy protections (Variable 1, 3), an antitrust challenge alleging injury from diminished privacy caused by intrusive data collection or lax data security likely would have to rely solely on qualitative evidence of a non-price effect to prevail at later stages of litigation (Variable 4). And with regard to intrusive data collection, the non-price effects and price/output effects likely are incommensurable and enforcers and courts may sometimes struggle to determine whether the effects diverge or align (Variable 5).
- 3. Recommendations:** Policymakers should recognize that antitrust litigation may not always be sufficient to protect consumers from intrusive privacy practices and low-quality data security. Other legal or regulatory protections should be deployed in tandem with antitrust law if policymakers wish to comprehensively address the problem of privacy intrusions and data breaches.

IX. “UNDEMOCRATIC” MARKET STRUCTURES AND THE POLITICAL POWER OF LARGE FIRMS

History has long since confirmed that “excessive concentration of economic power will breed antidemocratic political pressures.”¹⁰⁶ Markets controlled by “firms whose size allows them to treat customers and competitors with impunity”¹⁰⁷ often become “deeply political” insofar as such firms “exercise powers that possess the character of governance,” such as the power “to set policy, to regulate markets, and to tax.”¹⁰⁸ In addition, “market concentration can easily lead to a Medici vicious circle, where money is used to get political power and political power is used to make money.”¹⁰⁹ This dynamic can become a “profound threat to democracy” when it “yields gross inequality and material suffering, feeding an appetite for nationalistic and extremist leadership.”¹¹⁰

Today, economists have shown that concentration in the United States is increasing, both at macroeconomic levels¹¹¹ and in relevant antitrust markets.¹¹² Contemporary law and political economy scholars¹¹³ also maintain that the U.S. economy is rife with “structural inequalities” that have emerged from “background legal rules and systems [that] create[] economic, racial, gendered, and other forms of disparities in economic

wealth, opportunity, and inclusion.”¹¹⁴ This is evidenced, some argue, by stagnating wages, economic insecurity (i.e. inability to meet basic expenses), and higher prices, less innovation, and less worker autonomy.¹¹⁵

To address the problem of highly concentrated, undemocratic market structures in the digital technology sector, an antitrust lawsuit would rely on remedial relief to create unconcentrated, diverse, inclusive markets, and on deterrence, and the competitive process, to help maintain such markets. Two tools are available to achieve divestiture remedies through antitrust enforcement against dominant technology firms: Section 7 of the Clayton Act, which allows challenges to consummated mergers, and Section 2 of the Sherman Act, which allows the break-up of dominant firms. However, these tools have important limitations under current law.

A. CONSUMMATED MERGER CHALLENGES

The first variable—the threat of market failure—suggests degrees of uncertainty in deterring or remedying undemocratic market structures through consummated merger challenges are relatively high. Section 7 challenges to consummated mergers “effectively represent the same policy of targeted divestiture that could have, and arguably should have, been employed at the outset.”¹¹⁶ By definition, then, the deconcentrating effect of unwinding a consummated merger will only correct for an undemocratic market to the extent such a market evolved through horizontal acquisitions, rather than through exclusionary conduct, network effects, or other factors. Among the major digital technology firms, that is rarely the case.

As AAI’s work has shown, the vast majority of horizontal acquisitions by dominant tech firms have been of smaller rivals, which could have provided nascent or potential competition at the time they were acquired.¹¹⁷ To the extent dominant digital technology firms have made larger acquisitions, they are usually of complements, which do not compete with the firms in the provision of platform services.¹¹⁸ Thus, in the vast majority of instances, unwinding dominant tech firms’ consummated acquisitions would not have an immediate deconcentrating effect in a platform’s core market.

At most, consummated merger challenges in the digital technology sector therefore promise only the potential for de-concentration. They can free small rivals or large adjacent firms to enter and compete in the platforms’ core markets. However, small rivals likely face very long odds of success in these markets, precisely because they would be going up against entrenched, dominant incumbents protected by network effects. Large firms in adjacent markets may well choose not to enter and compete with dominant platforms for the same reason. Or, such firms may view a partnership with the platform as essential to distributing their products, in which case they may not wish to antagonize the platform by competing with it.¹¹⁹

B. BREAKING UP DOMINANT FIRMS

The first and second variables suggest that degrees of uncertainty in deterring or remedying undemocratic market structures through the antitrust laws’ other de-concentration tool, Section 2 of the Sherman Act, will vary according to the facts. Unlike

consummated merger challenges, the scope of recommended divestiture relief under Section 2 is not self-defining, nor is it likely to be as narrowly targeted.¹²⁰ However, history nonetheless shows that “the tantalizing goal of improving the economic and political order by restructuring dominant firms frequently has eluded its pursuers.”¹²¹

Part of the challenge is that proving a Section 2 violation includes satisfying a conduct element. As a preliminary matter, this means firms cannot be broken up if they have achieved or maintained a monopoly by competing, innovating, or through ordinary network effects. But even where the conduct element can be satisfied, a proposed antitrust remedy will be sanctioned by a court only if it is “tailored to fit the wrong creating the occasion for the remedy.”¹²² In the Microsoft case, for example, the D.C. Circuit vacated a break-up order because Microsoft was not afforded a factual hearing on this issue. The court explained that the “[m]ere existence of an exclusionary act does not itself justify full feasible relief against the monopolist to create maximum competition.”¹²³

The D.C. Circuit encouraged the district court, on remand, to consider whether there was “a sufficient causal connection between Microsoft’s anticompetitive conduct and its dominant position in the OS market” to warrant a break-up.¹²⁴ Absent such causation, the court believed a remedy enjoining the exclusionary conduct, but keeping the firm intact, would be more appropriate.¹²⁵

“If policymakers believe dominant digital technology firms should be broken up in the near term, whether to promote competition or on political economy grounds, they should not trust existing antitrust law alone and are more likely to accomplish that objective through legislation.”

The fifth variable—the compatibility of any incommensurable effects—suggests that degrees of uncertainty in remedying undemocratic markets also will vary according to the facts. In some instances, the wrong attributable to a given conduct offense will occasion a break-up remedy, and the remedy will be sufficiently administrable to be executed.¹²⁶ However, in other instances courts may hesitate to impose a break-up remedy if the remedy’s non-price and price effects threaten to diverge and are incommensurable. In Microsoft, part of the D.C. Circuit’s rationale for requiring a factual hearing was that Microsoft proffered evidence that the break-up would have led to higher software prices.¹²⁷ Although the court did not say so directly, such evidence, if substantiated, would have contrasted with the court’s finding that Microsoft was liable for its hard-to-measure, non-price harms despite the “uncertain consequences” of excluding middleware rivals.¹²⁸

The Microsoft court did not rule out a break-up remedy when non-price and price effects diverge. However, on remand, it cautioned the district court against imposing a break-up

remedy based upon an inference of harm alone.¹²⁹ Thus, to the extent a Section 2 case against a dominant technology firm is premised on qualitative evidence that is divergent or incommensurable with quantitative evidence of a price or output effect, and requires an inference of harm accordingly, courts applying current law may hesitate to impose a break-up remedy even if they find liability.

Finally, break-up attempts under Section 2 of the Sherman Act raise a unique challenge in that they are susceptible to long delays. The attempted break-up of IBM, which was never completed, is often held up as an example. The case generated 13 years of litigation, 700 days of trial, and “spanned the terms of five Presidents, nine Attorney Generals, and seven Assistant Attorney Generals.”¹³⁰ Since its dismissal in 1982, it has been derided by some as “the Antitrust Division’s Vietnam.”¹³¹

Perhaps tellingly, the judge overseeing the Antitrust Division’s case against Google, which was filed in October 2020, has scheduled the first day of trial for September 2023.¹³² To be sure, major Section 2 cases against dominant firms can have important salutary effects in the interim. Perhaps more importantly, they also may be settled with helpful divestitures in a much shorter timeframe.¹³³ However, to the extent de-concentration in any given digital market would require a final judicial verdict, an antitrust break-up remedy will not deliver it for at least several years. Several scholars, and the Majority Staff of the House Judiciary Antitrust Subcommittee, have alternatively advocated for break-up remedies via legislative fiat accordingly.¹³⁴

C. FINDINGS AND RECOMMENDATIONS

- 1. Deterrence Value: An antitrust enforcer’s prospects of achieving beneficial deterrence against undemocratic market structures in the digital technology sector through consummated merger challenges are uncertain under current Section 7 law, and its prospects through Section 2 challenges likely will vary according to the facts.** Section 7 challenges against the large digital technology firms create the possibility of de-concentration but do not assure it, because nascent and adjacent firms may struggle or refuse to challenge dominant incumbents protected by network effects (Variables 1, 2). Section 2 challenges may sometimes be based on conduct allegations that allow for a de-concentrating break-up remedy and sometimes not. (Variables 1, 2).
- 2. Remedial Value: The prospects of a beneficial remedy through a Section 7 consummated merger challenge are likewise uncertain, and the prospects of a beneficial remedy through a Section 2 challenge likely will vary according to the facts.** Absent a change in a law or reinterpretation of past precedent, Section 7 consummated merger challenges are unlikely to lead to effective remedies for undemocratic markets for the same reasons they are unlikely to lead to effective deterrence (Variables 1, 2). Section 2 challenges, in some instances, may lead to effective break-up remedies because the conduct allegations allow for a de-concentrating break-up remedy

and the non-price and price/output effects of such a remedy would align. In other instances, Section 2 challenges are unlikely to lead to an effective break-up remedy, either because a break-up would not be tailored to the alleged wrong or because the non-price and price/output effects of a break-up remedy threaten to diverge.

- 3. Recommendations:** Policymakers should not rely on antitrust law alone if they wish to achieve deconcentration and structurally democratic markets. If policymakers believe dominant digital technology firms should be broken up in the near term, whether to promote competition or on political economy grounds, they should not trust existing antitrust law alone to accomplish that objective. They are more likely to accomplish that objective by legislative fiat.

X. WORKPLACE FISSURING AND LABOR EXPLOITATION

“Few places clarify the distortionary impact of technology better than the labor market,” where platform technology appears to have allowed powerful firms to “redistribute profits upward” and “redistribute risks within a firm *downward*.”¹³⁵ Through “algorithmic management,” digital technology firms “can use real-time data to decide when to schedule workers to maximize profits and minimize costs,” including by retaining them as independent contractors rather than employees and thereby depriving them of all the protections that labor law affords.¹³⁶

Thus, when products sold by online retailers are delivered to our homes, the last mile to our individual doorways is often completed by a self-employed individual “paid on a piece-rate basis who bear[s] all the costs for the fuel, vehicle, parking tickets, and the risks of injury arising from a slip or fall or angry neighborhood dog.”¹³⁷ In a gig economy without labor law protections, and which is marked by extreme imbalances in bargaining power, median pay has stagnated despite increases in productivity; inequality within the distribution of labor remains high and rising; and labor’s share of national income has fallen.¹³⁸ By some measurements, labor markets also have grown highly concentrated, and firms have extracted more of the surplus generated by labor through anticompetitive agreements and unilateral practices that limit worker mobility.¹³⁹

To address the problem of labor exploitation in digital technology markets, an antitrust lawsuit seeking either deterrence or remedial relief would rely on the competitive process to create and increase pressure on large digital technology firms to raise their wages and improve the non-price terms on which they provide employment. The principal challenges for antitrust law in combatting labor exploitation in the digital technology sector lie in difficulties that can arise in proving a forced wealth transfer to a firm with market power in a labor market.

A. MARKET POWER IN LABOR MARKETS IN THE DIGITAL ECONOMY

Although existing antitrust law often focuses on seller power in accordance with the consumer protection aspect of its mission, U.S. courts and enforcers have long recognized that “monopoly and monopsony are symmetrical distortions of competition from an economic standpoint.”¹⁴⁰ Accordingly, antitrust law has long been interpreted and applied to protect the trading-partner welfare yielded by competition among buyers, including the worker welfare yielded by competition among employers who buy labor.¹⁴¹

The second variable—the likelihood of welfare tradeoffs—suggests degrees of uncertainty in deterring labor exploitation by dominant digital technology firms will vary according to the facts. Labor-market injuries can be caused when competition is restrained, but they can also be caused by lawful competition that antitrust law encourages. For example, when manufacturers innovate or efficiently reorganize their methods of production, causing them to produce the same or greater levels of output with fewer workers and lower labor costs and thereby charge lower prices to their trading partners, antitrust law encourages the result notwithstanding that workers may no longer be needed on a full time basis or may altogether lose their jobs.¹⁴² The firm’s trading partners in the product market—their customers—reap the competitive benefits of the innovation and efficiency. The firm’s trading partners in the labor market—their workers—are harmed, but only because the firm is meeting actual demand for labor, not because it is restraining or suppressing demand for labor.¹⁴³ There is no reduction in commercial rivalry among employers—that is, no disruption of the competitive process—when firms lawfully innovate. And worker injuries caused by commercial rivalry, rather than the lack thereof, are not afforded a remedy under existing antitrust law.¹⁴⁴

“Protecting workers from exploitation at the hands of large digital technology firms will require aggressive application of antitrust law and additional labor law protections, possibly including amendments to the labor exemption from antitrust law.”

The third variable—the detectability of a forced wealth transfer—also suggests degrees of uncertainty in deterring labor exploitation through antitrust lawsuits will vary according to the facts. Establishing a forced wealth transfer from a worker to a dominant digital technology firm often depends on the plaintiff’s ability to prove market power in a relevant labor market, which is typically necessary in a case challenging single-firm as opposed to multi-firm behavior. Under existing antitrust law, an employer that demands a wealth transfer from a worker cannot be found liable if it lacks market power in the labor market, unless it acts in concert with other firms.¹⁴⁵

When a single, dominant technology firm is alleged to have distorted labor-market competition, proof of labor-market power can be challenging. A key part of the challenge

“Where evidentiary challenges make deterrence or competition-restoring remedies unfeasible, antitrust litigation often will provide an uncertain solution, suggesting that it must be paired with complementary laws and regulations to proactively address major public policy problems raised in the digital technology sector.”

involves the nature of labor markets relative to product markets in the digital technology sector. Although it is easy to suspect that large digital technology firms wield significant market power in several well defined antitrust product markets, labor markets in the sector often have little in common with such product markets. Digital technology firms often compete for employees against rivals that sell unrelated products or services.

In the Antitrust Division’s high-tech no-poaching case in 2010, for example, the defendants included Adobe, Apple, Google, Intel, Intuit, Pixar, Lucasfilm, and eBay.¹⁴⁶ Some of these firms have little in common save for geographic proximity and an economic demand for computing talent.¹⁴⁷ That the firms entered into an illegal no-poaching agreement tends to confirm they are rivals in a relevant labor market, but it also tends to confirm that the particular market they distorted is relatively unconcentrated and includes at least eight major firms. While the existence of such an agreement can make a case under Section 1 of the Sherman Act, it can break a case involving single-firm behavior under Section 2. Such an agreement implies that any one of the firms, standing alone, would lack labor-market power and therefore would be unable to force a wealth transfer.

On the other hand, this implication does not *preclude* a finding of market power and a forced wealth transfer. That a relevant labor market comprised of eight employers may be defined says nothing about whether a narrower relevant market comprised of fewer employers may *also* be defined. Indeed, empirical research has shown that many labor markets might even be defined at the level of a single firm, insofar as many individual employers enjoy a measure of power over their employees even when the employees ostensibly have other options they could conceivably switch to.¹⁴⁸

B. FINDINGS AND RECOMMENDATIONS

- 1. Deterrence Value: An antitrust enforcer’s prospects of achieving beneficial deterrence against labor exploitation by large digital technology firms likely will vary according to the facts.** In some instances, gig workers may be injured by lawful competition itself, whereas in other instances they may be injured by illegal collusive or exclusionary restraints (Variable 2). Likewise, employers sometimes may be unable to force a wealth transfer owing to a lack of discernible labor-market power, and in other instances their labor-market power may be clear and demonstrable (Variable 3).

2. **Remedial Value: The prospects of a beneficial remedy also likely vary according to the facts.** Remedial uncertainty likely varies according to the facts for the same reason that deterrence uncertainty likely varies according to the facts (Variables 2, 3).
3. **Recommendations:** Policymakers should recognize that they cannot rely on current antitrust law alone if they wish to protect workers from exploitation at the hands of large digital technology firms. Other legal or regulatory protections should be used in tandem with antitrust law if policymakers wish to meaningfully address the problem of labor exploitation in the digital economy. Policymakers may wish to consider additional labor law protections, including amendments to the labor exemption from antitrust law, in addition to aggressively applying antitrust law where possible.

XI. SUMMARY OF FINDINGS AND RECOMMENDATIONS

Among the eight problems studied in this White Paper, the greatest challenges in obtaining effective deterrence, owing to the greatest uncertainty as to whether increased competition serves policymakers' needs or as to evidentiary challenges in surviving the preliminary stages of litigation, arise in the context of preference-shaping and addiction-based software design. The next greatest challenges, and next highest degrees of uncertainty, arise in the context of misinformation and disinformation, viewpoint discrimination, and privacy intrusions. Comparatively lesser challenges and comparatively less uncertainty, depending on the facts, arise in the context of self-preferencing, undemocratic market structures, and labor exploitation.

The greatest challenges in obtaining a beneficial remedy, owing to the greatest uncertainty based on the nature of the likely anticompetitive effect or the compatibility of incommensurable effects, arise in the context of preference-shaping, addiction-based software design, misinformation and disinformation, viewpoint discrimination, and privacy intrusions. Comparatively lesser challenges, and comparatively less uncertainty, depending on the facts, may arise in the context of self-preferencing, undemocratic market structures, and labor exploitation.

Importantly, the analysis in the preceding sections of this White Paper suggests that, at least theoretically, plaintiffs may be able to make plausible evidentiary allegations of at least an anticompetitive non-price effect caused by dominant-firm behavior associated with all eight of the identified public policy problems. Thus, policymakers should recognize that antitrust law has the capacity to provide some degree of deterrence value in addressing all of the problems and should continue to look for ways to marshal antitrust law effectively, as well as to seek beneficial reforms. However, questions as to whether increased competition serves policymakers' particular goals, and

practical challenges that can arise in supporting the necessary evidentiary allegations at preliminary stages of litigation, create varying degrees of uncertainty as to whether antitrust law is likely to actually achieve deterrence in practice. Policymakers therefore should be exploring alternative solutions for all eight of the problems as well.

The preceding analysis also suggests that degrees of uncertainty associated with plaintiffs' ability to obtain a remedy may vary within and across the eight problems. Policymakers should recognize that a plaintiff's ability to obtain a remedy may be subject to additional uncertainty when it relies solely on qualitative evidence of a non-price effect. Proof problems owing to the absence of "but-for-world" evidence, idiosyncratic trading-partner preferences, and uncertain causation make claims premised solely on qualitative evidence of a non-price effect more difficult for courts to assess than claims premised on quantitative evidence of price/output effects, or both.

In addition, many forms of single-firm conduct generate both non-price effects and price/output effects, and the two sometimes may be incommensurable. In some of these cases, policymakers should maintain confidence in antitrust remedies because the incommensurable effects align and are both harmful. However, in other cases, policymakers should recognize that a remedy is more uncertain for one of two reasons. First, the evidence may suggest that such incommensurable effects diverge. Second, evidentiary challenges may prevent enforcers and courts from determining whether incommensurable effects diverge. In either case, enforcers and courts may not be able to know whether a remedy would be harmful or beneficial on balance. And they likely would likely struggle to craft and impose a remedy, accordingly.

Finally, but importantly, the preceding analysis suggests that antitrust litigation under current law does not provide a comprehensive solution to any of the public policy problems discussed in this paper. Policymakers therefore will have to deploy other legal and regulatory tools in tandem with antitrust law, as well as potential expansions or modifications of existing antitrust law, if they wish to proactively address each problem.

XII. CONCLUSION

This White Paper finds that policymakers can use existing antitrust law, to varying degrees, to help solve each of eight identified public policy problems in the digital technology sector. When plausible, qualitative evidence suggests that such problems cause harmful, but unquantifiable non-price effects, antitrust enforcement should be pursued aggressively. However, policymakers should recognize that the antitrust laws' promise sometimes can be limited by considerable litigation and remedial uncertainty.

Bringing a viable antitrust case can deter the socially undesirable non-price harms generated by practices discussed in this White Paper, and, most important, it can culminate in beneficial settlements within reasonable time frames. When the litigation

settles or results in a plaintiff victory, it also can lead to valuable, competition-restoring remedies. Even if the litigation does not settle and plaintiffs fail to prove their claims at summary judgment or trial, creating antitrust risk and exposure for undesirable practices helps discourage them. It also signals to future new entrants and innovators that enforcers will work to keep markets open and unrestrained if incumbent monopolists' dominant positions become challengeable in the future.

However, policymakers should not pursue antitrust litigation in isolation. When increased competition may not serve policymakers' goals, and when evidentiary challenges make deterrence or competition-restoring remedies unfeasible, antitrust litigation often will provide an uncertain solution at best. Regardless, our analysis suggests that antitrust litigation must be paired with existing or new complementary laws and regulations to proactively address any of the eight public policy problems discussed in this White Paper.

REFERENCES

- ¹ RANDY M. STUTZ, ANTITRUST, DOMINANT FIRMS, AND PUBLIC POLICY PROBLEMS: A FRAMEWORK FOR MAXIMIZING SUCCESS BY MINIMIZING UNCERTAINTY, AM. ANTITRUST INST. (2021) [hereinafter “FRAMEWORK”].
- ² See *Bell Atl. Corp. v. Twombly*, 550 U.S. 544 (2007); see also Douglas H. Ginsburg, *Balancing Unquantified Harms and Benefits in Antitrust Cases Under the Consumer Welfare Standard*, 3 COLUM. BUS. L. REV. 824, 827 (2019) (“non-price effects may be difficult or impossible to quantify” but “[t]he temptation to ignore the qualitative must be resisted”).
- ³ See Tim Wu, *Tech Dominance and the Policeman at the Elbow*, in *AFTER THE DIGITAL TORNADO* 81, 84 (Kevin Werbach ed., 2020) (“[A] pending monopolization case, which focuses on exclusionary and anticompetitive acts and scrutinizes efforts to dominate industries, may affect firm conduct in recognizable ways.”); *id.* at 83 (arguing that “the IBM [antitrust] lawsuit and trial, despite never reaching a verdict, actually catalyzed numerous transformational developments key to the growth and innovation of computing industries”); Albert A. Foer, *The Politics of Antitrust in the United States: Public Choice and Public Choices*, 62 U. PITT. L. REV. 475, 496 (2001) (“As a generalization, the success of a case is secondary to the larger policy questions of: (1) what is the overall policy objective? (2) Are there better ways to achieve the objective? And, (3) what are the costs and benefits of bringing a case? As referee for the level playing field, the antitrust enforcer throws a flag not to win a case but to uphold the rule of law.”).
- ⁴ *FTC v. Actavis, Inc.*, 570 U.S. 136, 161 (2013); *Kirtsaeng v. John Wiley & Sons, Inc.*, 568 U.S. 519, 539 (2013) (“[T]he principal objective of antitrust policy is to maximize consumer welfare by encouraging firms to behave competitively.”) (quoting 1 P. Areeda & H. Hovenkamp, *Antitrust Law* ¶ 100, p. 4 (3d ed. 2006)); see also *Ohio v. Am. Express Co.*, 138 S. Ct. 2274, 2303 (2018) (“The antitrust laws were enacted for the protection of competition....”) (internal quotation omitted); *NYNEX Corp. v. Discos, Inc.*, 525 U.S. 128, 135 (1998) (antitrust law protects against harms “to the competitive process, i.e., to competition itself.”); *Nat’l Collegiate Athletic Ass’n v. Bd. of Regents of Univ. of Oklahoma*, 468 U.S. 85, 107, (1984) (“Congress designed the Sherman Act as a ‘consumer welfare prescription.’”) (quoting *Reiter v. Sonotone Corp.*, 442 U.S. 330, 343 (1979)).
- ⁵ See STUTZ, FRAMEWORK, *supra* note 1, § III.A (explaining five conceptions of “competition” and analyzing the Supreme Court’s basic formulation).
- ⁶ Maurice E. Stucke, *Is Competition Always Good?*, 1 J. ANTITRUST ENF. 162, 175–76 (2013) (discussing example of credit card company targeting low-income customers by offering free credit cards with high penalty fees, because customers tend to be overly optimistic about their ability to avoid penalties).
- ⁷ See Neil W. Averitt & Robert H. Lande, *Consumer Sovereignty: A Unified Theory of Antitrust and Consumer Protection Law*, 65 ANTITRUST L.J. 713, 733–34 (1997).
- ⁸ *United States v. Grinnell Corp.*, 384 U.S. 563, 770–71 (1966).
- ⁹ *United States v. Aluminum Co. of America*, 148 F.2d 416, 430 (2d Cir. 1945); see also Lande & Zerbe, *supra* note 26; Marina Lao, *No Fault Digital Platform Monopolization*, 61 W&M L. REV. 755, 781–83 (2020).
- ¹⁰ See Ioana Marinescu & Herbert J. Hovenkamp, *Anticompetitive Mergers in Labor Markets*, 4 INDIANA L.J. 1031, 1032 (2019) (distinguishing between efficient reduction in transaction costs and monopsonistic price suppression).
- ¹¹ See Howard A. Shelanski, *Information, Innovation, and Competition Policy for the Internet*, 161 U. PENN. L. REV. 1663, 1694 (2013) (“[I]nnovation itself excludes rivals by leaving them behind or by shutting them out of complementary product relationships, yet that innovation can still improve social welfare.”).
- ¹² See STUTZ, FRAMEWORK, *supra* note 1, § IV.A (explaining the view that antitrust properly condemns a powerful firm’s conduct only if the conduct causes a net decrease in aggregate growth measured as the sum of the welfare of all market participants, counting both sellers and buyers, and the contrasting view that antitrust law is intended to prevent the misappropriation of wealth in addition to promoting overall economic growth).
- ¹³ See *id.* § IV.B.
- ¹⁴ See *id.* § IV.C.
- ¹⁵ See *id.* § IV.C, n.89 (observing that certain non-price effects can be quantified and thus perhaps made commensurable with price effects).
- ¹⁶ DIPAYAN GHOSH & BEN SCOTT, #DIGITAL DECEIT: THE TECHNOLOGIES BEHIND PRECISION PROPAGANDA ON THE INTERNET, SHORENSTEIN CENTER ON MEDIA, POLITICS AND PUBLIC POLICY, HARVARD KENNEDY SCHOOL (Jan. 2018), available at <https://d1y8sb8igg2f8e.cloudfront.net/documents/digital-deceit-final-v3.pdf>.
- ¹⁷ Soroush Vosoughi, Deb Roy & Sinan Aral, *The Spread of True and False News Online*, 359 SCIENCE 1146, 1146 (2018).
- ¹⁸ GHOSH & SCOTT, *supra* note 16, at 1. In advance of the 2020 presidential election, Facebook, YouTube and Twitter deployed several “risk-reduction tools”—such as adding friction to content spread, boosting the signal of authoritative news sources, and enforcing platform policies announced in advance—to combat the spread of misinformation, but false information nonetheless spread widely. Ellen P. Goodman & Karen Kornbluh, *How Well Did Twitter, Facebook, and YouTube Handle Election Misinformation?*, SLATE (Nov. 10, 2020, 7:12 PM), <https://slate.com/technology/2020/11/twitter-facebook-youtube-misinformation-election.html> (concluding that “It’s still too soon to truly assess the platforms’ performance”).
- ¹⁹ DEREK WILDING ET AL., THE IMPACT OF DIGITAL PLATFORMS ON NEWS AND JOURNALISTIC CONTENT 147–51, REPORT OF THE CENTRE FOR MEDIA TRANSITION, UNIVERSITY OF TECHNOLOGY SYDNEY, NSW (2018), available at <https://www.accc.gov.au/system/files/ACCC%20commissioned%20report%20-%20The%20impact%20of%20digital%20platforms%20on%20news%20and%20journalistic%20content%2C%20Centre%20for%20Media%20Transition%20%282%29.pdf>.

²⁰ REUTERS INSTITUTE DIGITAL NEWS REPORT 2020 14 (2020), https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2020-06/DNR_2020_FINAL.pdf.

²¹ MATHEW HINDMAN & VLAD BARASH, DISINFORMATION, 'FAKE NEWS' AND INFLUENCE CAMPAIGNS ON TWITTER 13, KNIGHT FOUND'N (October 2018).

²² See Statement of the Federal Trade Commission Regarding Google's Search Practices 3, n.2, *In the Matter of Google Inc.*, FTC File No. 111-0163 (Jan. 3, 2013) [hereinafter "FTC Google Closing Statement"], available at https://www.ftc.gov/sites/default/files/documents/public_statements/statement-commission-regarding-googles-search-practices/130103brillgooglesearchstmt.pdf.

²³ See, e.g., HINDMAN & BARASH, *supra* note 21, at 13, 19 (study of over 600 "fake news outlets" defined as "sites that regularly publish content that appears to have been rigorously verified, but in fact was not," finding 10 million tweets from 700,000 Twitter accounts linked to the sites). Perhaps tellingly, some legislative efforts to preserve the viability of legitimate news producers have focused on eliminating competition among them. See, e.g., Journalism Competition and Preservation Act of 2019, H.R. 2054, 116th Cong. (2019) (bill that would establish 48-month safe harbor for small publishers to band together to negotiate with dominant online platforms to improve the access to and the quality of online news); *but see* Letter from Public Knowledge, American Antitrust Institute, Consumer Reports & Consumer Federation of America to House Committee on the Judiciary, Subcommittee on Antitrust, Commercial, and Administrative Law (Oct. 25, 2019) (warning against creation of news content cartel), available at <https://www.antitrustinstitute.org/work-product/aai-joins-with-leading-advocacy-groups-in-highlighting-risks-of-antitrust-exemptions-for-news-content-creators/>; see also LAURA ALEXANDER, COUNTERVAILING POWER: A COMPREHENSIVE ASSESSMENT OF A PERSISTENT BUT TROUBLING IDEA, AM. ANTITRUST INST. (Oct. 15, 2020), <https://www.antitrustinstitute.org/work-product/new-aai-white-paper-analyzes-the-pitfalls-of-countervailing-power-as-a-response-to-rising-market-concentration/>.

²⁴ See, e.g., REUTERS INSTITUTE DIGITAL NEWS REPORT, *supra* note 20, at 29 (12-country survey results show 36% of respondents used Facebook for news in the last week and 21% used YouTube).

²⁵ See, e.g., Filippo Menczer & Thomas Hills, *Information Overload Helps Fake News Spread, and Social Media Knows It*, 323 SCI. AM. 54 (2020) (study modeling online information overload and finding that "even when we want to see and share high-quality information, our inability to view everything in our news feeds inevitably leads us to share things that are partly or completely untrue.").

²⁶ For further elaboration, see STUTZ, FRAMEWORK, *supra* note 1, § III.B; see also MARK R. PATTERSON, ANTITRUST LAW IN THE NEW ECONOMY 56 (2017) (distinguishing among "credence," "experience," and "search" goods); Ariel Ezrahi & Maurice E. Stucke, *The Curious Case of Competition and Quality*, 3 J. ANTITRUST ENF. 227 (2015) (same).

²⁷ See, e.g., Bharat N. Anand, *The U.S. Media's Problems Are Much Bigger than Fake News and Filter Bubbles*, HARV. BUS. REV. (Jan. 5, 2017) ("Media companies are experiencing an extreme form of competition that comes with digital technologies" and implication is that "the best product doesn't always win"); GHOSH & SCOTT, *supra* note 16, at 29; see also STUTZ, FRAMEWORK, *supra* note 1, § III.B (discussing "vaporware" as example of competition via naked deception).

²⁸ See John M. Newman, *Antitrust in Zero-Price Markets: Foundations*, 164 U. PENN. L. REV. 149, 167 (2015).

²⁹ Inferior terms of barter may manifest specifically in more onerous demands for users' attention or personal data. We treat the use of addiction science to attract attention and platforms' use of intrusive privacy practices as distinct problems, discussed *infra* in Sections VI and VIII.

³⁰ PATTERSON, *supra* note 26, at 56.

³¹ See John M. Newman, *Antitrust in Attention Markets: Objections and Responses*, 59 SANTA CLARA L. REV. 743, 764–65 (2020).

³² We assume that misinformation and disinformation is deceptive and that the quality of "news" comprised of it can be proven to be categorically low. See HINDMAN & BARASH, *supra* note 21, at 13; ARTHUR C. PIGOU, THE ECONOMICS OF WELFARE pt. II ch. IX § 17 (4th ed. 1932) ("As a rule . . . the social net product of any dose of resources invested in a deceptive activity is negative."). News also can be slanted, or presented in combination with opinion, in potentially misleading or otherwise subjectively undesirable ways. This risks a different kind of potential quality degradation, which presents even greater proof problems in antitrust cases.

³³ See, e.g., Ben Thompson, *Defining Aggregators*, STRATECHERY (Sept. 26, 2017), <https://stratechery.com/2017/defining-aggregators/>.

³⁴ See, e.g., Thales S. Teixeira, *A Survival Guide for Startups in the Era of Tech Giants*, HARVARD BUS. REV. (Feb. 21, 2020), <https://hbr.org/2020/02/a-survival-guide-for-startups-in-the-era-of-tech-giants> ("Big Tech has the money, technology, data, and talent to replicate and enhance any technological innovation that is not fully protected by patents — which encompasses most digital products.").

³⁵ FTC Google Closing Statement, *supra* note 22, at 1.

³⁶ Press Release, European Commission, Commission Sends Statement of Objections to Amazon for the Use of Non-Public Independent Seller Data and Opens Second Investigation into Its E-commerce Business Practices (Nov. 10, 2020), available at https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2077.

³⁷ See JAY SHAMBAUGH, RYAN NUNN, & PATRICK LIU, HOW DECLINING DYNAMISM AFFECTS WAGES 6–7, THE HAMILTON PROJECT (Feb. 2018), https://www.hamiltonproject.org/assets/files/how_declining_dynamism_affects_wages.pdf.

³⁸ Scott Galloway, *Silicon Valley's Tax-Avoiding, Job-Killing, Soul-Sucking Machine*, ESQUIRE (Feb. 8, 2018), <https://www.esquire.com/news-politics/a15895746/bust-big-tech-silicon-valley/> ("The narrative has become universal and static. . . . Companies thread this needle or are denied the requisite oxygen (capital) to survive infancy."); see also Lina M. Kahn, *Separation of Platforms and Commerce*, 119 COLUM. L. REV. 973, 984–93 (2019) (collecting journalism and discussing limits on investment data).

³⁹ See, e.g., STACY MITCHELL, RON KNOX & ZACH FREED, AMAZON'S MONOPOLY TOLLBOOTH 2, INST. FOR LOCAL SELF-RELIANCE (July 2020) (summarizing key findings involving Amazon's means of extracting wealth from independent sellers on its site), available at https://cdn.ilsr.org/wp-content/uploads/2020/07/ILSR_Report_AmazonTollbooth_Final.pdf; see also Kevin Caves & Hal Singer, *When the Econometrician Shrugged: Identifying and Plugging Gaps in the Consumer Welfare Standard*, 26 GEO. MASON L. REV. 395, 402–05 (2018).

⁴⁰ See STUTZ, FRAMEWORK, *supra* note 1, § IV.B (discussing debate associated with courts' inconsistent evidentiary demands). In the Microsoft case, the court did not require such a showing. *United States v. Microsoft Corp.*, 253 F.3d 34, 79 (D.C. Cir. 2001) (holding that a defendant sometimes "is made to suffer the uncertain consequences of its own undesirable conduct"); see also Eleanor Fox, *What is Harm to Competition? Exclusionary Practices and Anticompetitive Effect*, 70 ANTITRUST L.J. 371, 374 (2002) ("Debate over the concept of competitive harm can be disguised as a debate over proof. . . . If, upon the plaintiff's satisfying its prima facie case, one can infer a reasonable likelihood of output limitation . . . , then the problem is about proof. But if the plaintiff can make a prima facie case by proving facts that do not support such an inference, the problem is about concept.").

⁴¹ Caves & Singer, *supra* note 39, at 402.

⁴² The Federal Trade Commission struggled with a similar determination in evaluating Google's self-preferencing conduct in 2013. See FTC Google Closing Statement, *supra* note 22, at 3 (noting that "reasonable search algorithms may differ as to how best to rank any given website" and that "Challenging Google's product design decisions in this case would require the Commission – or a court – to second-guess a firm's product design decisions where plausible procompetitive justifications have been offered, and where those justifications are supported by ample evidence."); see also Hillary Greene, *Muzzling Antitrust: Information Products, Innovation and Free Speech*, 95 BOSTON U. L. REV. 35 (2015) (discussing challenges of predatory product design and re-design claims and proposing alternative analytical frameworks to avoid an all-or-nothing approach).

⁴³ Feng Zhu & Kihong Liu, *Competing with Complementors: An Empirical Look at Amazon.com*, 39 STRAT. MGMT. J. 2618, 2637 (2018).

⁴⁴ *Id.* at 2618; see also Kahn, *supra* note 38, at 984–93.

⁴⁵ See Rebecca Haw Allensworth, *The Commensurability Myth in Antitrust*, 69 VANDERBILT L. REV. 1, 17–18 (2016) ("[A] single restriction can simultaneously offer benefits and costs to a single consumer, or benefit some consumers while harming others," and "a restriction may inflict harm on a consumer today but promise him benefits in the future"); see also Greene, *supra* note 42 (chronicling courts' tendencies toward "all-or-nothing approach" in weighing incommensurable speech and competition values).

⁴⁶ Concurring and Dissenting Statement of Commissioner J. Thomas Rosch Regarding Google's Search Practices, *In the Matter of Google Inc.*, FTC File No. 111-0163 (Jan. 3, 2013).

⁴⁷ See, e.g., Jeanne Whalen, *Europe Fined Google Nearly \$10 Billion for Antitrust Violations, But Little Has Changed*, WASH. POST. (Nov. 10, 2020, 3:24 PM ET) (surveying views of antitrust lawyers and competitors), available at <https://www.washingtonpost.com/technology/2020/11/10/eu-antitrust-probe-google/>.

⁴⁸ SHOSHANA ZUBOFF, *THE AGE OF SURVEILLANCE CAPITALISM* (2019).

⁴⁹ Gerhard Wagner & Horst Eidenmüller, *Down by Algorithms? Siphoning Rents, Exploiting Biases, and Shaping Preferences: Regulating the Dark Side of Personalized Transactions*, 86 U. CHI. L. REV. 581, 597 (2019); see ZUBOFF, *supra* note 48, at 305-07 (discussing example in which games were used to steer users to pizza restaurant).

⁵⁰ ZUBOFF, *supra* note 48, at 34.

⁵¹ Jaron Lanier & E. Glen Weyl, *A Blueprint for a Better Digital Society*, HARV. BUS. REV. (Sept. 26, 2018), <https://hbr.org/2018/09/a-blueprint-for-a-better-digital-society>.

⁵² *Id.*; see also Wagner & Eidenmüller, *supra* note 49, at 601 ("It would be naïve to think that the master of the algorithm will act only altruistically, with a view to the well-being of the individuals whose preferences are manipulated.").

⁵³ Wagner & Eidenmüller, *supra* note 49, at 602.

⁵⁴ See *id.* at 601.

⁵⁵ See Allensworth, *supra* note 45, at 8 ("[I]n the typical antitrust case, consumer preferences about intangibles such as quality and variety are unobservable."); see also *id.* at 22 (noting possibility that "[q]uality improvements or the addition of product features, unlike price changes, are valued idiosyncratically, meaning that a single quality change may improve consumer welfare for one set of consumers while doing nothing for another set.").

⁵⁶ ELI PARISER, *THE FILTER BUBBLE: WHAT THE INTERNET IS HIDING FROM YOU* 9 (2011); see also Kashmir Hill, *Facebook Manipulated 689,003 Users' Emotions For Science*, FORBES.COM (June 28, 2014, 2:00 PM EDT), <https://www.forbes.com/sites/kashmirhill/2014/06/28/facebook-manipulated-689003-users-emotions-for-science/?sh=209ebab1197c>.

⁵⁷ PARISER, *supra* note 56, at 232.

⁵⁸ See generally *id.*

⁵⁹ Phil Longstreet & Stoney Brooks, *Life Satisfaction: A Key to Managing Internet and Social Media Addiction*, 50 TECH. SOCIETY INT'L J. 73, 73 (2017); see also Sergey Tereshchenko & Edward Kasparov, *Neurobiological Risk Factors for the Development of Internet Addiction in Adolescents*, 62 BEHAV. SCI. 1 (2019).

- ⁶⁰ Melissa G. Hunt et al., *No More FOMO: Limiting Social Media Decreases Loneliness and Depression*, 27 J. SOC. & CLIN. PSY. 751, 752 (2018) (citing 13 studies); see also Gregory Day & Abbey Stemler, *Are Dark Patterns Anticompetitive?*, 72 ALA. L. REV. 1, 21 (2020) (citing internet addiction studies showing problems associated with social impairment, risk-taking, depression, sleep deprivation, self-injurious behaviors, and altered decision-making).
- ⁶¹ Day & Stemler, *supra* note 60, at 14; see *id.* at 19–21 (citing and discussing research studies showing causal links between heightened internet use and gray matter recession; possible link between internet addiction and altered dopamine receptors; and link between internet addiction and the body's release of cortisol).
- ⁶² See, e.g., Yasmin Samrai, *How Stanford Profits Off Addiction*, THE STANFORD REV. (Feb. 4, 2020), <https://stanfordreview.org/how-stanford-profits-tech-addiction-social-media/>; CENTER FOR HUMANE TECHNOLOGY, LEARN THE FACTS ABOUT SOCIAL MEDIA'S HARMS (Oct. 13, 2020), <https://ledger.humanetech.com/>.
- ⁶³ See Tim Wu, *Blind Spot: The Attention Economy and the Law*, 82 ANTITRUST L.J. 771, 787–88 (2019).
- ⁶⁴ See MAJORITY STAFF, H. COMM. ON THE JUDICIARY, 116TH CONG., INVESTIGATION OF COMPETITION IN DIGITAL MARKETS: REPORT AND RECOMMENDATIONS 135 (Comm. Print 2020) [hereinafter “House Majority Staff Report”] (“[Y]our only job is to get an extra minute.... They can monetize a minute of activity at a certain rate. So the only metric is getting another minute.”) (quoting former Facebook engineer).
- ⁶⁵ Maurice Stucke & Amanda Reeves, *Behavioral Antitrust*, 86 INDIANA L.J. 1527, 1548 (2011); see also RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE 75 (2008).
- ⁶⁶ THALER & SUNSTEIN, *supra* note 65, at 75.
- ⁶⁷ *Id.*
- ⁶⁸ See Gideon Yaffe, *Recent Work on Addiction and Responsible Agency*, 30 PHIL. & PUB. AFFAIRS 178, 186 (2002) (discussing how rational actors can make irrational choices by entering “a lifestyle of high usage of a substance that induces tolerance and reinforces its own consumption and where a high usage lifestyle promises a lower level of welfare than a low usage lifestyle”); but see Gary Becker & Kevin Murphy, *A Theory of Rational Addiction*, 96 J. POL. ECON. 675 (1988) (arguing that addictive behavior is rational behavior given certain assumptions).
- ⁶⁹ See, e.g., THALER & SUNSTEIN, *supra* note 65, at 6. One can imagine, perhaps, products designed with the intent to encourage users to discover truthful news, develop healthy eating or exercise patterns, or discover superior bargains when shopping for products.
- ⁷⁰ Craig Parshall, *Big Tech and the Whole First Amendment*, FED. SOC'Y REG. TRANS. PROJ. (Aug. 14, 2020), <https://regproject.org/blog/big-tech-the-whole-first-amendment/>; see also REPUBLICAN STAFF REPORT, H. COMM. ON THE JUDICIARY, 116TH CONG., REINING IN BIG TECH'S CENSORSHIP OF CONSERVATIVES (Comm. Print 2020) [hereinafter “HOUSE MINORITY STAFF REPORT”].
- ⁷¹ Tarleton Gillespie, *Platforms Are Not Intermediaries*, 2 GEO. L. TECH. REV. 198, 201 (2018); see also James Grimmelman, *Speech Engines*, 98 MINN. L. REV. 869, 871 (2014) (distinguishing views of scholars Jennifer Chandler and Frank Pasquale, who view Google as “conduit,” from scholars Eric Goldman and Eugene Volokh, who view Google as “editor”).
- ⁷² See, e.g., Greene, *supra* note 42, at 43–46 (discussing First Amendment defense in *Search King, Inc. v. Google Tech., Inc.*, No. CIV-02-1457-M, 2003 WL 21464568, at *1-2 (W.D. Okla. May 27, 2003)).
- ⁷³ See generally PARISER, *supra* note 56.
- ⁷⁴ Five Republican members of the House of Representative recently alleged that certain applications of content-moderation policies by Twitter, Google, YouTube, Facebook, and Amazon constitute anecdotal evidence of bias against conservatives. See HOUSE MINORITY STAFF REPORT, *supra* note 70, at 5–26.
- ⁷⁵ See, e.g., Thomas J. Horton, *Efficiencies and Antitrust Reconsidered: An Evolutionary Perspective*, 60 ANTITRUST BULL. 168, 178 (2015) (discussing recognition in works by Schumpeter and other proponents of dynamic competition that “competitive diversity and variability at all systemic levels catalyze and encourage maximum innovation and dynamic systemic efficiency, which leads to a robust and healthy competitive economic system.”).
- ⁷⁶ See, e.g., Fed. Comm'ns Comm'n, Notice of Inquiry ¶ 76, at 24, In the Matter of 2010 Quadrennial Regulatory Review – Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, No. 09-182 (May 25, 2010) (“[W]e recognize that there may be tension among the goals of competition, localism, and diversity. For example, proposed transactions may generate efficiencies and enhance program offerings but reduce the number of independent media owners, viewpoint diversity, minority ownership, or localism.”).
- ⁷⁷ Frank Bajak, *Squelched by Twitter, Trump Seeks New Online Megaphone*, ASSOCIATED PRESS (Jan. 9, 2021) (reporting expert predictions that “there may be an accelerated splintering of the social media world along ideological lines”).
- ⁷⁸ Neil W. Averitt & Robert H. Lande, *Using the “Consumer Choice” Approach to Antitrust Law*, 74 ANTITRUST L.J. 175, 192 (2007).
- ⁷⁹ *Id.*
- ⁸⁰ *Id.* (citing BARRY SCHWARTZ, THE PARADOX OF CHOICE (2004)).
- ⁸¹ See Averitt & Lande, *Using the “Consumer Choice” Approach*, *supra* note 78, at 183, 195 (noting that “the options [consumers] value are identified by their preferences as expressed in the marketplace” and that an “industry-by-industry” analysis is needed “to understand in which industries variety is particularly important to consumers; in which ones the necessary variety must be created by independent competitors; and what particular number of competitors are required.”); but see *id.* at 237 (arguing that, although choice-centric antitrust analysis is “somewhat more complex” and “less tied to objective metrics, such as prices and elasticities,” “there are mechanisms to avoid or minimize this problem.”).

⁸² Greene, *supra* note 42, at 36.

⁸³ ZUBOFF, *supra* note 48.

⁸⁴ *See id.* at 439–440.

⁸⁵ Complaint 2–5, United States v. Facebook, Inc., No. 1:19-cv-02184 (D.D.C. filed July 24, 2019).

⁸⁶ *Id.*

⁸⁷ Complaint 1–8, In the Matter of Cambridge Analytica, Docket No. 9383 (F.T.C. filed July 22, 2019).

⁸⁸ Rae Hodge, *2019 Data Breach Hall of Shame: These Were the Biggest Data Breaches of the Year*, CNET.COM (Dec. 27, 2019, 4:00 AM PT), <https://www.cnet.com/news/2019-data-breach-hall-of-shame-these-were-the-biggest-data-breaches-of-the-year/> (discussing alleged negligence that led to breaches by Amazon Web Services, ElasticSearch, Marriott, Facebook and Instagram, First American Financial Corp., Burger King, the American Medical Collection Association, Capital One, Adobe, and others, and noting that 2019 was “the ‘worst year on record’ for data breaches” according to a data security research firm).

⁸⁹ M. Ryan Calo, *The Boundaries of Privacy Harm*, 86 INDIANA L.J. 1131, 1142–43 (2011) (quoting Samuel Warren & Louis Brandeis, *The Right to Privacy*, 4 HARV. L. REV. 193, 196 (1890)); *see also* Daniel J. Solove, *A Taxonomy of Privacy*, 154 U. PA. L. REV. 477, 480 (2006); Daniel J. Solove, *Conceptualizing Privacy*, 90 CAL. L. REV. 1087, 1129–40 (2002).

⁹⁰ *See, e.g.*, Brooke Crothers, *Google Search Rival DuckDuckGo Tops 100 Million Daily Searchers, A First*, FORBES (Jan. 21, 2021, 4:30 PM EST), available at <https://www.forbes.com/sites/brookecrothers/2021/01/16/google-search-rival-duckduckgo-exceeds-100-million-daily-searches-a-first/?sh=29d0bb7247d3>.

⁹¹ *See* Dina Srinivasan, *The Antitrust Case Against Facebook: A Monopolist’s Journey Towards Pervasive Surveillance In Spite of Consumers’ Preference for Privacy*, 16 BERKELEY BUS. L.J. 39, 46–54 (listing examples).

⁹² ALEX MARTHEWS & CATHERINE TUCKER, *PRIVACY POLICY AND COMPETITION*, BROOKINGS INST. (2019).

⁹³ *Id.* Of course, consumer failure to switch is not necessarily indicative of a lack of demand for privacy. If, for example, DuckDuckGo provides inferior search results than Google, then consumers would not be expected to switch unless the gains in privacy outweigh the losses in search-result quality.

⁹⁴ Susan Athey, Christian Catalini & Catherine Tucker, *The Privacy Paradox: Small Money, Small Costs, Small Talk* (Stanford Inst. for Econ. Pol’y Research, Working Paper No. 17-032, Sept. 27, 2017).

⁹⁵ *See* Menczer & Hills, *supra* note 25.

⁹⁶ *See supra* notes 66–67 and accompanying text.

⁹⁷ *See, e.g.*, Masooda Bashir et al., *Online Privacy and Informed Consent: The Dilemma of Information Asymmetry*, ASIST (Feb. 24, 2016), available at <https://asistdl.onlinelibrary.wiley.com/doi/full/10.1002/pra2.2015.145052010043>.

⁹⁸ *Cf. supra* note 93.

⁹⁹ *See* MARTHEWS & TUCKER, *supra* note 92, at 25 (“There are few tools or accepted methods of measuring the potential benefits of privacy regulation.”); *but see id.* at 25–26 (discussing efforts to quantify privacy outcomes by extrapolating from empirical data on identity thefts and data breaches).

¹⁰⁰ *See* RANDY M. STUTZ, *THE PROPOSED MERGER OF STAPLES AND OFFICE DEPOT: LESSONS FROM HISTORY AND NEW COMPETITIVE CONCERNS*, AM. ANTITRUST INST. (2015), <https://www.antitrustinstitute.org/wp-content/uploads/2018/08/AAI-White-Paper-StaplesOfficeDepot.pdf>.

¹⁰¹ *See* Maria LaMagna & Jacob Passy, *Want to Delete Facebook? Read What Happened to These People First*, MARKETWATCH (Oct. 31, 2019, 8:50 AM) (noting that 44% of users ages 29-44 reported deleting the app but that the company reported a 1.6% increase in active users year-over-year).

¹⁰² *See* STUTZ, *supra* note 100.

¹⁰³ *See* VERIZON, *2019 DATA BREACH INVESTIGATIONS REPORT 2* (2019) (noting that 43% of breaches targeted small businesses and 16% were public sector entities).

¹⁰⁴ Paul Bischoff, *How Data Breaches Affect Stock Market Share Prices*, COMPARI TECH (April 2020), available at <https://www.comparitech.com/blog/information-security/data-breach-share-price-analysis/>.

¹⁰⁵ Anthony Mirhaydari, *Facebook Stock Recovers All \$134 Billion Lost After Cambridge Analytica Data Scandal*, CBS NEWS (May 10, 2018, 7:56 PM), available at <https://www.cbsnews.com/news/facebook-stock-price-recovers-all-134-billion-lost-in-after-cambridge-analytica-datascandal/>.

¹⁰⁶ Robert Pitofsky, *The Political Content of Antitrust*, 127 U. PENN. L. REV. 1051, 1051 (1979).

¹⁰⁷ TIM WU, *THE CURSE OF BIGNESS* 14–15 (2018).

¹⁰⁸ Zephyr Teachout & Lina Kahn, *Market Structure and Political Law: A Taxonomy of Power*, 9 DUKE J. OF CON. LAW & POL’Y 37, 37–38 (2014).

¹⁰⁹ Luigi Zingales, *Towards a Political Theory of the Firm 1* (Univ. of Chicago, Stigler Ctr., Working Paper No. 10, 2017).

¹¹⁰ Wu, *supra* note 107, at 14.

- ¹¹¹ See, e.g., Thomas Philippon, *The Economics and Politics of Market Concentration*, THE REPORTER, NBER (Dec. 2019(4)), <https://www.nber.org/reporter/2019number4/economics-and-politics-market-concentration>.
- ¹¹² See, e.g., *Hearing on “Examining the Impact of Health Care Consolidation,” H. Subcomm. on Oversight and Investigations*, 115th Cong. (2018) (statement of Martin Gaynor, E.J. Barone Univ. Prof. of Econ. & Health Policy, Heinz College, Carnegie Mellon University) (reviewing evidence of increased concentration in geographic hospital, health insurance and physician services markets).
- ¹¹³ See Jedediah Britton-Purdy et al., *Building a Law-and-Political-Economy Framework: Beyond the Twentieth-Century Synthesis*, 129 YALE L.J. 1784 (2020).
- ¹¹⁴ K. Sabeel Rahman, *Constructing and Contesting Structural Inequality*, 5 CRIT. ANAL. OF L. 99, 101 (2018).
- ¹¹⁵ Felicia Wong, K. Sabeel Rahman & Dorian Warren, *Democratizing Economic Power to Break the Cycle of American Inequality*, STANFORD SOCIAL INNOV. REV., Winter 2020, at 16–17.
- ¹¹⁶ John Kwoka & Tommaso Valletti, *Scrambled Eggs & Paralyzed Policy: Breaking Up Consummated Mergers and Dominant Firms* 18 (forthcoming 2021), draft available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3736613.
- ¹¹⁷ See DIANA L. MOSS, THE RECORD OF WEAK U.S. MERGER ENFORCEMENT IN BIG TECH 5–6, AM. ANTITRUST INST. (2019) (reviewing over 720 Big Tech acquisitions spanning three decades, including many that fell below HSR thresholds, and finding that they are challenged at a lower-than-average rate).
- ¹¹⁸ See CBI Insights, *Visualizing Tech Giants’ Billion-Dollar Acquisitions*, CBIINSIGHTS.COM (May 5, 2020) (listing and depicting every billion-dollar acquisition made by Facebook, Amazon, Microsoft, Google, and Apple), available at <https://www.cbinsights.com/research/tech-giants-billion-dollar-acquisitions-infographic/>.
- ¹¹⁹ One exception to the high risk of inefficacy of consummated merger challenges in de-concentrating digital technology markets may be the Facebook-Instagram merger. Instagram is unique because it was a nascent competitor to Facebook when it was acquired, but it has since grown substantially. See, e.g., Tim Wu, *The Case for Breaking Up Facebook and Instagram*, WASH. POST. (Sept. 28, 2018, 1:11 PM), <https://www.washingtonpost.com/outlook/2018/09/28/case-breaking-up-facebook-instagram/> (describing Instagram as Facebook’s “greatest natural competitor”). Challenges to Facebook’s acquisition of Instagram, on both Section 7 and Section 2 grounds, are currently pending. See *FTC v. Facebook*, No. 1:20-cv-03590 (D.D.C. filed Dec. 9, 2020); *New York v. Facebook*, No. 1:2020-CV-03589 (D.D.C. filed Dec. 9, 2020).
- ¹²⁰ See *United States v. Microsoft Corp.*, 253 F.3d 34, 103 (D.C. Cir. 2001) (“The Supreme Court has explained that a remedies decree in an antitrust case must seek to ‘unfetter a market from anticompetitive conduct,’ to ‘terminate the illegal monopoly, deny to the defendant the fruits of its statutory violation, and ensure that there remain no practices likely to result in monopolization in the future.’”) (internal citations omitted).
- ¹²¹ William E. Kovacic, *Failed Expectations: The Troubled Past and Uncertain Future of the Sherman Act as a Tool for Deconcentration*, 74 IOWA L. REV. 1105, 1105 (1989); see also Diana L. Moss, *Breaking Up Is Hard to Do: The Implications of Restructuring and Regulating Digital Technology Markets*, ANTITRUST SOURCE (Oct. 2019).
- ¹²² *Microsoft*, 253 F.3d at 107.
- ¹²³ *Id.* at 106.
- ¹²⁴ *Id.*
- ¹²⁵ *Id.* at 107.
- ¹²⁶ See *United States v. AT&T*, 552 F. Supp. 131 (D.D.C. 1982), *aff’d mem. sub nom. Maryland v. United States*, 460 U.S. 1001 (1983).
- ¹²⁷ *Microsoft*, 253 F.3d at 102.
- ¹²⁸ See *id.* at 79 (explaining that insistence on quantitative evidence for injuring nascent, innovative rivals “would only encourage monopolists to take more and earlier anticompetitive action”); see also STUTZ, FRAMEWORK, *supra* note 1, § IV, n.92 (discussing substantial foreclosure as the basis for liability in certain exclusion cases).
- ¹²⁹ *Microsoft*, 253 F.3d at 106–07.
- ¹³⁰ Kovacic, *supra* note 121, at 1109, n.20 (quoting Donald Baker, *Government Enforcement of Section Two*, 61 N.D. L. REV. 898, 899 n.13 (1986)).
- ¹³¹ *Id.* (attributing remark to Donald Baker, who attributed remark to Robert Bork).
- ¹³² Taylor Hatmaker, *The Big Google DOJ Antitrust Case Probably Won’t Go to Trial Until 2023*, TechCrunch (Dec. 18, 2020, 4:38 PM), available at <https://techcrunch.com/2020/12/18/google-justice-department-antitrust-trial-date/>
- ¹³³ See *supra* Section II.
- ¹³⁴ See, e.g., HOUSE MAJORITY STAFF REPORT, *supra* note 64, at 379; Kahn, *supra* note 38; Elizabeth Warren, *Here’s How We Can Break Up Big Tech*, MEDIUM (Mar. 8, 2019), <https://medium.com/@teamwarren/heres-how-we-can-break-up-big-tech-9ad9e0da324c>.
- ¹³⁵ JOELLE GAMBLE, HOW TECHNOLOGY CHANGES THE BALANCE OF POWER IN THE LABOR MARKET 3–4 (Aug. 2019), available at <https://groundworkcollaborative.org/resource/how-technology-changes-the-balance-of-power-in-the-labor-market/>.
- ¹³⁶ *Id.* at 4.
- ¹³⁷ David Weil, *Understanding the Present and Future of Work in the Fissured Workplace Context*, 5 RUSSELL SAGE FOUND’N J. OF SOC. SCI. 147, 147 (2019).

¹³⁸ Marshall Steinbaum, *Antitrust, The Gig Economy, and Labor Market Power*, 82 DUKE J. L. & CONTEMP. PROBS. 45, 45 (2019) (citing economic studies).

¹³⁹ See Jose Azar et al., *Concentration in U.S. Labor Markets: Evidence from Online Vacancy Data*, 66 LABOUR ECON. 101886 (2020); see also RANDY M. STUTZ, THE EVOLVING ANTITRUST TREATMENT OF LABOR-MARKET RESTRAINTS: FROM THEORY TO PRACTICE, AM ANTITRUST INST. (2018), https://www.antitrustinstitute.org/wp-content/uploads/2018/09/AAI-Labor-Antitrust-White-Paper_0-1.pdf.

¹⁴⁰ *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.*, 549 U.S. 312, 322 (2007) (quoting *Vogel v. American Soc. of Appraisers*, 744 F.2d 598, 601 (7th Cir. 1984) (Posner, J.)).

¹⁴¹ STUTZ, *supra* note 100, at 20 (discussing wage fixing cases dating back to the 1920s).

¹⁴² See Marinescu & Hovenkamp, *supra* note 10, at 1032.

¹⁴³ See Herbert Hovenkamp, *Antitrust's Borderline* 8–10 (U of Penn., Inst. for Law & Econ. Research Paper, No. 20-44, Aug. 11, 2020), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3656702.

¹⁴⁴ See, e.g., *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 489 (1977) (disallowing claim by bowling alley injured by increased competition and holding that to have antitrust standing plaintiffs must allege injuries “of the type the antitrust laws were intended to prevent”) (emphasis added).

¹⁴⁵ When labor-market rivals form agreements not to poach each other’s employees or to fix the wage or non-wage terms of employment, for example, proof of market power is no obstacle. The law treats market power as a given and condemns the conduct as per se illegal, and the federal government prosecutes the agreements criminally. See DEP’T OF JUSTICE & FED. TRADE COMM’N, ANTITRUST GUIDANCE FOR HUMAN RESOURCE PROFESSIONALS 4 (2016).

¹⁴⁶ See *United States v. Adobe Sys., Inc.*, No. 10-CV-1629, 2011 WL 10883994 (D.D.C. Mar. 18, 2011); *In re High-Tech Employee Antitrust Litig.*, 856 F. Supp. 2d 1103, 1108 (N.D. Cal. 2012).

¹⁴⁷ See Marinescu & Hovenkamp, *supra* note 47, at 1035 (comparing labor and product markets of eBay and Intuit).

¹⁴⁸ See Azar et al., *supra* note 139. Determinations of labor-market definition and power often involve complexities that product-markets often do not, including two-sided matching, search frictions, and other factors. See STUTZ, EVOLVING ANTITRUST TREATMENT, *supra* note 139, at 14–16. Because of the empirical difficulties involved in defining labor markets, some scholars propose the use of presumptive antitrust market definitions for labor markets. See Ioana Marinescu & Eric A. Posner, A Proposal to Enhance Antitrust Protection Against Labor Market Monopsony (Roosevelt Inst. Working Paper, Dec. 21, 2018), https://rooseveltinstitute.org/wp-content/uploads/2019/01/RI_ProposalToEnhanceAntitrustProtection_workingpaper_11419-1.pdf.