AGAINST ENGAGEMENT

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In this Article, we focus on a key dimension of commercial surveillance by data-intensive digital platforms that is too often treated as a supporting cast member instead of a star of the show: the concept of engagement. Engagement is, simply put, a measure of time, attention, and other interactions with a service. The economic logic of engagement is simple: more engagement equals more ads watched equals more revenue. Engagement is a lucrative digital business model, but it is problematic in several ways that lurk beneath the happy sloganeering of a "free" internet.

Our goal in this Article is to isolate engagement as a distinct and dangerous concept that should be specifically regulated. There is a benefit to seeing past the glib justificatory rhetoric and taking a hard look at engagement-based, surveillance-advertising-funded models as potentially problematic. Unfettered engagement strategies bear significant and underappreciated costs that are endangering our privacy, our democracy, and our culture itself. It's time that wrongful engagement, and the asserted "free" business models it generates, started to bear the burden of those costs.

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INTRODUCTION

The world has changed. Digital and mobile technologies have revolutionized our society over the past twenty-five years, offering new possibilities to connect, learn, and entertain. Few people in today's information societies feel complete leaving their homes without their smartphones, tablets, connected watches, or other products of the information revolution. These devices have become seemingly inescapable, as they have become integrated into so much of our social, political, economic, romantic, professional, and educational lives, whether it is restaurants with online reservation systems and QR codes for menus, school and business systems requiring two-factor authentication for access, or dating software requiring us to "swipe right" to connect.

At the same time, with apologies to Tolkien,[1] much that once was, has been lost. Our politics have become driven by "alternative facts" and polarization, the business models of journalism have become undermined by the loss of ad revenue to technologies companies, professions from cashiers to travel agents have been decimated, and the middle class has been squeezed by a wide and growing wealth inequality unseen since the days of the industrial robber barons.[2] The defining image of our modern information society may well be couples and groups of friends sitting at café, restaurant, and dinner tables "alone together" as they stare into their smartphones in deafening silence.[3]

While it is beyond dispute that the information revolution has created challenges for law and regulation, it is worth considering more broadly the extent to which our existing regulatory frameworks and concepts remain adequate to describe, diagnose, and remedy these problems. As scholars and policymakers wrestle with these problems, it's clear that some of the existing frameworks with which we approach these questions (such as the fair information practices, informational self-determination, and unfair and deceptive trade practices) need some support. Concepts like transparency, data minimization, deception, and confidentiality remain crucial, but they are also insufficient. Our digital world has shifted toward platforms and overwhelming incentives for the extraction of human information, labor, and attention in ways that have not yet been fully accounted for in our information and technology rules.

This Article focuses on the concept of engagement. Engagement is a key element of Silicon Valley's grand vision for society that is often overlooked in policy and academic studies. We believe that engagement deserves greater

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[1] *See* J.R.R. TOLKIEN, THE RETURN OF THE KING 959 (1955) ("For the world is changing: I feel it in the water, I feel it in the earth, and I smell it in the air.").

[2] Lily Rothman, *How American Inequality in the Gilded Age Compares to Today*, TIME (Feb. 5, 2018, 10:30 AM), https://time.com/5122375/american-inequality-gilded-age/ [https://perma.cc/Y2DB-MHRY].

[3] *Cf.* SHERRY TURKLE, ALONE TOGETHER: WHY WE EXPECT MORE FROM TECHNOLOGY AND LESS FROM EACH OTHER 55-56, 173-78 (2011) (studying psychological effects of digital technologies).

attention, and should be understood alongside surveillance advertising, informational capitalism, data security, and other key analytical concepts used to assess the information revolution. Engagement spans the spectrum of strategies designed to maximize attention to and interaction with a service, such as optimizing a service's most appealing offerings through personalization, sending notifications to remind people to reengage, and exploiting knowledge of human behavior to reduce the friction of finding, watching, or sharing through design choices like infinite scroll and auto-replay of short videos.[4] "Engagement" is a term that gets thrown about haphazardly in technology policy debates, but it is usually deployed as either a *technical business metric* or a broader *economic ideology*.[5]

As a business metric, engagement is simply a measure of the time, attention, degree of exposure, and other interactions with a service.[6] It is the core element in many of the business models of the so-called "free" internet, which are (once again in the parlance of Silicon Valley) "optimized for engagement."[7] On its own, engagement might seem innocuous, and may even represent a measure of a site or platform's popularity.

But this changes when engagement itself becomes the business model, particularly at scale. This is the second, broader meaning of engagement, which is as an economic ideology justifying extractive business models. Take, for example, a "free" service that makes its money from "monetizing" the attention of "users." Engagement models were and remain the model of ad-supported network television, and they are the model of many of the most profitable digital services like Google and Facebook. Their "raw" materials are the attention of their human customers, and data about those customers that is used to attract that

[4] *See, e.g.*, BRIAN HAVEN, MARKETING'S NEW KEY METRIC: ENGAGEMENT (2007); Jonah Berger, Wendy W. Moe & David A. Schweidel, *What Holds Attention? Linguistic Drivers of Engagement*, 87 J. MKTG. 793, 793-809 (2023); *see also* WOODROW HARTZOG, PRIVACY'S BLUEPRINT: THE BATTLE TO CONTROL THE DESIGN OF NEW TECHNOLOGIES (2018); BRETT FRISHMANN & EVAN SELINGER, RE-ENGINEERING HUMANITY (2018); Neil M. Richards, *The Perils of Social Reading*, 101 GEO. L.J. 689, 713 (2013); William McGeveran, *The Law of Friction*, 2013 U. CHI. LEGAL F. 15.

[5] Carly Hill, *The Social Media Metrics to Track in 2024 (And Why)*, SPROUT BLOG (July 20, 2023), https://sproutsocial.com/insights/social-media-metrics/; *see generally* NIR EYAL, HOOKED: HOW TO BUILD HABIT-FORMING PRODUCTS (2014).

[6] *See* Hamidreza Shahbaznezhad, Rebecca Dolan & Mona Rashidirad, *The Role of Social Media Content Format and Platform in Users' Engagement Behavior*, 53 J. INTERACTIVE MKTG. 47, 48 (2021).

[7] *See* AILEEN NIELSEN, UC BERKELEY CTR. FOR LONG-TERM CYBERSECURITY, TECH HAS AN ATTENTION PROBLEM 3-4 (2021) ("Producers of digital products understandably want people to engage with their products, both for direct profit motives but also, indirectly, because higher engagement metrics putatively suggest that humans like a product and find it useful.").

attention.[8] Their technology may be complex, but their economic logic is simple: more engagement equals more ads watched equals more revenue.[9]

Clarifying the differences between the technical and ideological definitions of engagement is important, but it still leaves us unclear about what to do with engagement models as a matter of policy. To address this gap, we offer in this Article a third understanding of engagement, which is as a *legal concept* suitable for regulation. From this perspective, we can understand engagement as actions that encourage people to spend more time, attention, or effort in a way that disproportionately benefits the party stimulating the engagement and burdens the engaged. Some kinds of engagement may be innocuous or even potentially beneficial, but other kinds represent a new and significant problem that our law and regulatory frameworks should begin to address. In this sense, engagement becomes a *disloyal* and *wrongful* practice when it conflicts with the best interests of people who use digital tools, when it is misleading, or when it is harmful to people, institutions, and societal interests. This form of disloyal engagement represents a legal wrong that consumers need to be protected from through law.

We argue, therefore, that when industry engages in wrongful engagement strategies, the law should intervene. Our central contribution of this Article is to take the concept of engagement out of the realm of metrics and tech-speak ideology and develop it into a coherent concept of a problematic and self-serving activity that can be regulated across legal frameworks like privacy, consumer protection, health law, and more to improve our civil liberties, mental wellbeing, and democracy.

Engagement may well be a popular and lucrative digital business model, but it is problematic in a number of ways that lurk beneath the cheerful sloganeering of a "free" internet. Engagement imposes significant costs and risks to values we hold dear, and in this Article, we unpack some of those costs. We argue that focusing regulatory attention on engagement might offer a fruitful way of tackling many of the often-bewildering array of human problems attributable to digital platforms in ways that are both complementary to, and more direct than

[8] *See* JULIE E. COHEN, BETWEEN TRUTH AND POWER: THE LEGAL CONSTRUCTIONS OF INFORMATIONAL CAPITALISM 48-49 (2019) [hereinafter COHEN, BETWEEN TRUTH AND POWER].

[9] *See generally* LEE MCGUIGAN, SELLING THE AMERICAN PEOPLE: ADVERTISING, OPTIMIZATION, AND THE ORIGINS OF ADTECH (2023) (tracing digital marketing algorithms and strategies back to 1950s); NIELSEN, *supra* note 7 (detailing potential harms of targeting human attention with digital products); TIM HWANG, SUBPRIME ATTENTION CRISIS: ADVERTISING AND THE TIME BOMB AT THE HEART OF THE INTERNET (2020) (exploring risks of attention-seeking digital advertising); SHOSHANA ZUBOFF, THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER (2019) (highlighting undercurrents of wealth and power in "surveillance capitalism"); TIM WU, THE ATTENTION MERCHANTS: THE EPIC SCRAMBLE TO GET INSIDE OUR HEADS (2017) (discussing commodification of attention in progressing technological mediums).

data protection or false advertising approaches.[10] We also develop a "wrongful engagement doctrine" consisting of principles to inform privacy law, consumer protection, corporate law, and other areas that should be more sensitive to the underlying incentives driving data processing and technological design. In particular, we argue that the kinds of duties of loyalty that scholars and lawmakers have been proposing in recent years offer a particularly promising tool with which to tackle many of the dangers of engagement models.[11]

Part I examines engagement's purposes and assumptions, and locates it as a crucial element in a broader, interlocking ideological system, along with its associated concepts of "free services," "innovation," and "disruption." Our analysis explores and distinguishes the first two understandings of *engagement as a metric* and *engagement as an economic ideology*. Part II identifies and

[10] COHEN, BETWEEN TRUTH AND POWER, *supra* note 8, at 80 ("Techniques for motivating enrollment and participation in the surveillance economy also have contributed importantly to the emergence of data-driven, instrumentarian power and the formation of data-driven agency. Within commercial surveillance environments, the themes of play, games, and participation are increasingly prominent.").

[11] *See, e.g.*, Neil Richards & Woodrow Hartzog, *Taking Trust Seriously in Privacy Law*, 19 STAN. TECH. L. REV. 431, 457-58 (2016) [hereinafter Richards & Hartzog, *Taking Trust Seriously*]; Neil Richards & Woodrow Hartzog, *Privacy's Trust Gap: A Review*, 126 YALE L.J. 1180, 1198-1201 (2017); Neil Richards & Woodrow Hartzog, *Trusting Big Data Research*, 66 DEPAUL L. REV. 579, 582-83 (2017); Neil Richards & Woodrow Hartzog, *A Relational Turn for Data Protection?*, 6 EUR. DATA PROT. L. REV. 492, 495-97 (2020) [hereinafter Richards & Hartzog, *Relational Turn*]; Neil Richards & Woodrow Hartzog, *A Duty of Loyalty for Privacy Law*, 99 WASH. U. L. REV. 961, 961-62 (2021); Woodrow Hartzog & Neil Richards, *The Surprising Virtues of Data Loyalty*, 71 EMORY L.J. 985, 985 (2022) [hereinafter Hartzog & Richards, *Surprising Virtues*]; Woodrow Hartzog & Neil Richards, *Legislating Data Loyalty*, 97 NOTRE DAME L. REV. REFLECTION 356, 356 (2022) [hereinafter Hartzog & Richards, *Legislating Data Loyalty*]; Jack M. Balkin, *Information Fiduciaries and the First Amendment*, 49 U.C. DAVIS L. REV. 1183, 1186-87 (2016); Jack M. Balkin, *The Fiduciary Model of Privacy*, 134 HARV. L. REV. F. 11, 11-13 (2020); ARI EZRA WALDMAN, PRIVACY AS TRUST: INFORMATION PRIVACY FOR AN INFORMATION AGE 8 (2018); Christopher W. Savage, *Managing the Ambient Trust Commons: The Economics of Online Consumer Information Privacy*, 22 STAN. TECH. L. REV. 95, 113-14 (2019); Jonathan Zittrain, *Engineering an Election*, 127 HARV. L. REV. F. 335, 339-40 (2014); Lindsey Barrett, *Confiding in Con Men: U.S. Privacy Law, the GDPR, and Information Fiduciaries*, 42 SEATTLE U. L. REV. 1057, 1058 (2019); Ariel Dobkin, *Information Fiduciaries in Practice: Data Privacy and User Expectations*, 33 BERKELEY TECH. L.J. 1, 1 (2018); Ian Kerr, *The Legal Relationship Between Online Service Providers and Users*, 35 CAN. BUS. L.J. 419, 446-47 (2001); DANIEL J. SOLOVE, THE DIGITAL PERSON: TECHNOLOGY AND PRIVACY IN THE INFORMATION AGE 102-04 (2006); Richard S. Whitt, *Old School Goes Online: Exploring Fiduciary Obligations of Loyalty and Care in the Digital Platforms Era*, 36 SANTA CLARA HIGH TECH. L.J. 75, 79 (2019); Kiel Brennan-Marquez, *Fourth Amendment Fiduciaries*, 84 FORDHAM L. REV. 611, 613-14 (2015); Lauren Henry Scholz, *Fiduciary Boilerplate: Locating Fiduciary Relationships in Information Age Consumer Transactions*, 46 J. CORP. L. 143, 144-45 (2020); Claudia E. Haupt, *Platforms as Trustees: Information Fiduciaries and the Value of Analogy*, 134 HARV. L. REV. F. 34, 35 (2020). For a criticism of information fiduciary proposals, see Lina M. Khan & David E. Pozen, *A Skeptical View of Information Fiduciaries*, 133 HARV. L. REV. 497, 499-501 (2019).

describes the dangers of engagement, drawing a distinction between *engagement's tools* (such as dark patterns, gamification, and targeting) and its *harmful consequences* (such as misinformation, radicalization, attention theft, ad creep, uncompensated labor, data-security risks, and psychological harms). Part III offers a third way to think about *engagement as a legal wrong*. Like other harmful concepts addressed by laws such as fraud, nuisance, neglect, and pollution, we make the case for an engagement doctrine that would address wrongful engagement. We conceptualize wrongful engagement as having three key components: (1) strategies of influence; (2) meant to increase online participation; (3) in an unfair, deceptive, or abusive way. We map a pathway for the law to mitigate the dangers of unrestrained engagement, whether through data protection law, consumer protection law, duties of loyalty, or in appropriate cases, an outright ban on both specific engagement strategies and the surveillance advertising practices that incentivize their deployment.

We conclude by arguing that a wrongful engagement doctrine would help lawmakers identify and restrict a set of practices that have long been a source of concern but that the law has struggled to address. Engagement strategies touch issues of surveillance, disinformation, harassment, labor exploitation, loneliness, distraction, and addiction. But engagement has avoided regulation both because of the slipperiness of its definition between metric, ideology, and harmful practice and because it cannot be addressed by any one existing legal framework. Conceptualizing engagement as a legal wrong will give lawmakers consistency and a rallying point for democratic support. Unfettered engagement generates significant and underappreciated costs that are endangering our privacy, our democracy, and our culture itself. It's time that engagement—and the assertedly "free" business models it generates—started to bear the burden of those costs. This Article offers a path for us to get there.

I. ENGAGEMENT AS ECONOMIC IDEOLOGY

As we navigate the complexity of our evolving digital society and seek to drive policy in ways that promote human flourishing, scholars, policymakers, and others have attempted to document the many threats raised by data-intensive digital platforms to our privacy, mental well-being, time, attention, labor, relationships, and public institutions. Prior work has focused on a variety of issues, including specific practices like dark patterns and targeted advertising, and broader concepts such as surveillance or informational capitalism.[12] This body of work has sought to identify new problems by describing them, giving them a name, and subjecting them to scrutiny in order to better understand and

[12] *See, e.g.*, COHEN, BETWEEN TRUTH AND POWER, *supra* note 8, at 9-10 (outlining "legal-institutional transformation" caused by platforms); SHOSHANNA ZUBOFF, THE AGE OF SURVEILLANCE CAPITALISM 18-21 (2019) (exploring concept of "surveillance capitalism" as one that seeks to claim data about human experience as raw materials for new forms of economic activity at scale); Amy Kapczynski, *The Law of Informational Capitalism*, 29 YALE L.J. 1460, 1463-67 (2020) (reviewing and contrasting Cohen and Zuboff).

possibly regulate them. Professor Julie Cohen calls this system "information capitalism," the mass accumulation and increasing complexity of knowledge by industry though "platforms" to maximize profit.[13] When industry controls the mediated environment, she argues, it can convert every human experience possible into data, horde it all for itself and use that data to extract our labor and attention and to mold us into more homogenous and consistent commodities so we can be more efficiently exploited for financial gain.[14] Shoshanna Zuboff refers to a similar concept of "surveillance capitalism," which she defines as the claiming of "human experience as free raw material for hidden commercial practices of extraction, prediction, and sales . . . [a] parasitic economic logic in which the production of goods and services is subordinated to a new global architecture of behavioral modification."[15] Our own account of extraction sits alongside these two accounts, perhaps descriptively closer to Zuboff's but analytically closer to Cohen's, as it is more concerned with the roles that law places in enabling and potentially constraining the excesses of information capitalism to benefit society as a whole.

Any assessment of engagement first requires a sense of what we are talking about, which is something of a challenge because "engagement" is rarely defined and is often used in different ways to mean different things. This Part identifies two important, but different, ways people use the term engagement. The first is as a technical measure of a person's interaction with a service. The second is as an ideology—a set of goals and strategies to increase the technical metric and to justify it as a virtuous good. The economic ideology of engagement is the product of a business model that prioritizes the extraction and exploitation of human information, attention, and labor for financial and other gain.[16]

Technical metrics of engagement include picking up a phone, opening a screen, interacting with notifications, scrolling, mouse movements, keystrokes, opening links and apps, posting, editing, downloading and sharing information, searching, tagging, and every kind of information that reflects time spent looking at a screen or interacting with a service. From this perspective, engagement is a thing that can be (and often is) measured—how much time, information, and attention that is obtained. But as an ideology, engagement prioritizes and justifies customer time and interaction with a service. Engagement from this perspective is not merely a number, but a state of mind: engagement is a good thing, of which more is always better.

Thus, social media, video streaming, search, and other "free" digital services design their platforms to maximize the amount of time their human customers

[13] COHEN, BETWEEN TRUTH AND POWER, *supra* note 8, at 5-6 ("In a regime of informational capitalism, market actors use knowledge, culture, and networked information technologies as means of extracting and appropriating surplus value, including consumer surplus.").

[14] *Id.* at 38-44, 63-70.

[15] ZUBOFF, *supra* note 12, at ix.

[16] *See* COHEN, BETWEEN TRUTH AND POWER, *supra* note 12, at 83-89 (describing manipulative societal power of engagement-optimized platforms).

spend interacting with them, the number of their interactions, and the depth of their disclosures.[17] In their parlance, the measure of that time for a particular customer is "engagement" (the technical definition) and the services are thus "optimized for engagement" (the justificatory economic ideology). Other scholars have helpfully termed this process "the attention economy."[18] Professor Elettra Bietti refers to this dynamic as the "data-attention imperative."[19]

Because these companies are really interested in making money, they are under pressure from venture capitalists and other shareholders to "monetize" their engagement. Of course, while engagement is most associated with digital social media, older forms of media have also pioneered engagement. Broadcast television, for example, is largely "free," and generates revenue by interspersing advertisements between and among segments of programming.[20] Much like broadcast television, platforms like TikTok, Instagram Reels, and YouTube Shorts intersperse paid, short-form video advertisements in the feeds of customers. Short-form video and endless scroll are designed for the "attention economy," and deliberately addictive to keep users on the app longer and viewing more advertisements.[21]

There are a variety of reasons that might lead firms to pursue an engagement model. The first of these is the "attention economy" rationale we have already seen. In an advertising-based revenue model where more attention equals more ads equals more revenue, the financial appeal of optimizing the service to

[17] *See, e.g.*, NAT'L ACAD. SCI., SOCIAL MEDIA AND ADOLESCENT HEALTH (2023) ("Social media platforms use a variety of algorithms to manage content that users see. . . . Their goal is to maximize engagement and, for many platforms, keep users on them for as long as possible.").

[18] *See, e.g.*, NIELSON, *supra* note 7, at 1; *see also* SIVA VAIDHYANATHAN, ANTI-SOCIAL MEDIA: HOW FACEBOOK DISCONNECTS US AND UNDERMINES DEMOCRACY 82-89 (2018); WU, *supra* note 9, at 81, 317 (describing development of attention economy from early advertisement to television to social media); HWANG, *supra* note 9, at 12-13.

[19] *See generally* Elettra Bietti, The Data-Attention Imperative (Feb. 16, 2024) (unpublished manuscript) (available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4729500).

[20] *See, e.g.*, John W. Schoen, *How Do Cable Companies Make Their Money?*, CNBC (Apr. 20, 2015, 5:33 PM), https://www.cnbc.com/2015/04/20/how-do-cable-companies-make-their-money.html [https://perma.cc/A8Q2-DV7U]. There are, of course, outliers, like commercial-free public television, which in the United Kingdom is supported by taxes including a television license fee, and in the United States is supported by limited taxes, corporate donations, and occasional "pledge drives," in which public broadcasters essentially beg the public for money to support their operations. *See, e.g.*, *License Fee and Funding*, BBC, https://www.bbc.com/aboutthebbc/governance/licencefee [https://perma.cc/K7VK-4R5E] (last visited May 14, 2024); Madhulika Sikka, *How Do Federal $$$ Get to Your Local Station?*, PBS PUB. ED. (July 6, 2020), https://www.pbs.org/publiceditor/blogs/pbs-public-editor/how-do-federal-get-to-your-local-station/ [https://perma.cc/B4LU-WJ7J].

[21] Kaitlin Woolley & Marissa A. Sharif, *The Psychology of Your Scrolling Addiction*, HARV. BUS. REV. (Jan. 31, 2022), https://hbr.org/2022/01/the-psychology-of-your-scrolling-addiction.

maximize the amount of time human eyeballs watch a screen is easy to understand.

However, this is easier said than done. People get bored easily and tire of holding a device and staring at a screen. The key to thriving in an attention economy is overcoming people's natural tendencies.[22] (It turns out the same is true for getting people to buy junk food).[23] This is where companies must get clever, and where both startups and established companies have invested an underappreciated amount of their effort to build the digital economy. Professor Adam Alter has written that to engineer an addictive digital experience, you need some combination of six ingredients: goals, feedback, progress, escalation, cliffhangers, and social interaction.[24] Spending five minutes on any popular app or platform competing in the attention economy will display these techniques in spades. As we will explore below, companies often deploy these techniques in disloyal and harmful ways.

Another reason companies might want to increase engagement metrics is that interacting with apps, websites, and devices provides a rich source of personal information to be harvested for profiling and profit. Facebook used to have only a "Like" option if you wanted to engage with a post without leaving a comment. Then it rolled out five more options, like "Love," "Sad," and "Angry." This engineering tweak gave Facebook's human customers five more paths for engagement, and five more nuanced ways to create a profile of what people like, what they don't, and in what ways. Beyond serving as some additional spice for the addictive experience machine, such techniques are useful ways to create more data.[25]

In addition to its use as a business-model metric, engagement also functions as something of an ideology—a crucial element in a broader interlocking ideological system—along with its associated concepts of "free services," "innovation," and "disruption." Engagement is justified as connecting people, allowing them to explore their preferences, make choices, and connect to each other in the new digital public square, free of cost. If people are spending so

[22] *See, e.g.*, JOHANN HARI, STOLEN FOCUS: WHY YOU CAN'T PAY ATTENTION—AND HOW TO THINK DEEPLY AGAIN 74-76 (2022).

[23] *See, e.g.*, MICHAEL MOSS, HOOKED: FOOD, FREE WILL, AND HOW THE FOOD GIANTS EXPLOIT OUR ADDICTIONS, at xxvii (2021).

[24] *See, e.g.*, ADAM ALTER, IRRESISTIBLE: THE RISE OF ADDICTIVE TECHNOLOGY AND THE BUSINESS OF KEEPING US HOOKED 9 (2017) ("Behavioral addiction consists of six ingredients: compelling goals that are just beyond reach; irresistible and unpredictable positive feedback; a sense of incremental progress and improvement; tasks that become slowly more difficult over time; unresolved tensions that demand resolution; and strong social connections.").

[25] Will Oremus, *Facebook's Five New Reaction Buttons: Data, Data, Data, Data, and Data*, SLATE (Feb. 24, 2016, 1:06 PM), https://slate.com/technology/2016/02/facebook-s-5-new-reactions-buttons-are-all-about-data-data-data.html [https://perma.cc/YC23-7AYA] ("[G]iving users six reaction options means that Facebook can start to gather much more nuanced data on how users are reacting to any given post.").

much time engaged, this reveals their preferences, and who are we to judge their choice on how to spend their time?

That's the argument, anyway. But as it turns out, and as we explore below, each element of this self-justificatory claim is problematic, if not outright false. For now, however, the important point is that engagement can function as a metric of success that excludes competing considerations. If products are designed so that people use them, goes the argument, what's the problem? If people are choosing to use free products and spend significant chunks of their time engaging with them, they are making a free choice to do so, which, industry suggests, is a good thing.

Notice, though, the role that "engagement" is playing in this context. It is operating as a replacement for ethical judgment about the deployment of the technology on human beings. A product that scores highly on engagement metrics allows its managers and designers to avoid difficult ethical questions, because engagement gets rebranded as "revealed preferences": the quantified expressions of people's desires. Thus, when engagement is high, managers and designers can set aside ethical concerns, because, after all, if their "users" are engaged, who are they to impose their own judgments about how other people are spending their time? Anything to the contrary is just "paternalism," and paternalism is bad, managers and designers argue, because it denies people their authentic choices and preferences.

The problem with this argument is that engagement is not a neutral measure of customer utility. Industry intentionally uses every trick at its disposal—including design tools, behavioral science, data science, dark patterns, and A/B testing—to maximize engagement levels. So, it rings hollow when industry holds up people's "choices" that they have attempted to engineer as an ethical justification for increased surveillance, manipulation, and exposure to risk.

There are, of course, other elements of the ideological system of engagement that are problematic, but in order to show this, it is necessary to examine some of the rarely acknowledged features, harms, and risks of engagement models, to which we will now turn.

II. THE HARMS OF ENGAGEMENT

Despite the intuitive appeal of engagement models to firms (particularly startups), unconstrained engagement models impose significant external costs on consumers who use them, and on society as a whole. In this Part, we identify and describe some of those harms and dangers. First, we look at engagement's *privacy harms*, explaining how ad-supported engagement products supply a logic of surveillance that has led to the contemporary internet becoming the most-surveilled environment in human history. Second, we examine how engagement's attempts to attract human attention can lead to the loss of focus by creating incentives to constantly attract, distract, and entice human minds that are focused on other things, a problem sometimes described as "*attention theft*." Third, we discuss the *emotional harms* that engagement models inflict, by exploiting known human vulnerabilities to create a situation we term "FOMO

by design." Fourth, and finally, we look at the *threats to our democracy* that engagement models (particularly social media) pose, arguing that whereas many engagement models are justified as "the new public square," in reality, engagement models drive companies pursuing profit to also segment, divide, and polarize our politics as they monetize our division, our distrust, and our political outrage.

A. *Privacy*

Perhaps the most obvious consequence of engagement models is that they make money by serving ads, and that they collect data about their human customers to serve what companies call "more relevant ads." This is what Jack Balkin has termed the "grand bargain" of social media companies and other engagement models: "free communications services in exchange for pervasive data collection and analysis."[26] Companies often refer to this as their "value proposition": you, our *users*, get *free services*, and in exchange we show you ads that we make *more relevant* by learning more about you.[27] Like many sales pitches, though, this setup is more complicated and dangerous than industry lets on.[28]

The grand bargain isn't as simple as "free services in exchange for relevant ads," but rather "addictive services in exchange for participation in a regime of fine-grained surveillance of your activity, desires, and psychological pressure points." Everything else being equal, consumers have consistently demonstrated a strong preference against fine-grained surveillance of everything they do, everything they read, and everywhere they go.[29] In its most optimistic version, the "grand bargain" is a series of freely-made decisions that lead to "win-win" scenarios.[30] But one can also view this more cynically as thrusting vulnerable

[26] JACK M. BALKIN, FIXING SOCIAL MEDIA'S GRAND BARGAIN 1 (2018), https://www.hoover.org/sites/default/files/research/docs/balkin_webreadypdf.pdf [https://perma.cc/C2SP-23JV] (proposing social media and other digital companies should have fiduciary duties toward individuals whose data is collected and used).

[27] In a 2019 *Wall Street Journal* op-ed, Facebook CEO Mark Zuckerberg asserted that "[p]eople consistently tell us that if they're going to see ads, they want them to be relevant." Mark Zuckerberg, *The Facts About Facebook*, WALL ST. J. (Jan. 24, 2019, 7:03 PM), https://www.wsj.com/articles/the-facts-about-facebook-11548374613 (asserting Facebook's business model allows its "users" to have control over whether collected data is used for advertising purposes).

[28] *See* COHEN, BETWEEN TRUTH AND POWER, *supra* note 8, at 58-59 (arguing technology companies' default is to sublimate consent by obscuring choice to prevent collection of data and failing to disclose type of data collected).

[29] *See* JOSEPH TUROW, YPHTACH LELKES, NORA A. DRAPER & ARI EZRA WALDMAN, ANNENBERG SCH. FOR COMMC'NS, UNIV. OF PA., AMERICANS CAN'T CONSENT TO COMPANIES' USE OF THEIR DATA 16 (2023) (citations omitted); Alessandro Acquisti, Laura Brandimarte & George Loewenstein, *Secrets and Likes: The Drive for Privacy and the Difficulty of Achieving It in the Digital Age*, 30 J. CONSUMER PSYCH. 736, 737-38 (2020); MÜZE FAZLIOGLU, INT'L ASS'N OF PRIV. PROS., PRIVACY AND CONSUMER TRUST 8 (2023).

[30] BALKIN, *supra* note 26, at 1.

human consumers into an involuntary data-barter transaction in which they are targeted for persuasion to buy products based upon detailed algorithmic profiles of them.

Industry's goal is to influence human behavior with the power that human information confers on those who deploy it. That influence usually tries to get people to act in ways that make money for those companies, whether through purchase or attention.[31] In this process, data science works at two levels—allowing insights about a particular individual based upon what is observed about them, as well as population-level insights based on observations about many other people against which the individual data is compared.[32] This double power is enhanced when the companies delivering ads combine it with the known vulnerabilities in human cognition that have been developed by the behavioral sciences in recent decades, whether we call that power nudging, dark patterns, or something else entirely.[33] But as Julie Cohen has argued, industry doesn't just want to make ads more relevant to you.[34] Their overall goal is to homogenize our desires and behaviors to more efficiently and predictably commodify our attention and labor.[35]

B. *Focus ("Attention Theft")*

There is also substantial support for the idea that engagement strategies are completely wrecking our focus—that is, our ability to pay attention, think deeply and creatively, and work for sustained lengths of time.[36] There are at least two different kinds of human focus, and engagement strategies like incessant notifications, frictionless sharing, and feedback loops are contributing to the evisceration of both of them.[37] Moreover, there is evidence that these strategies

[31] NEIL RICHARDS, WHY PRIVACY MATTERS 43-44 (2021).

[32] *See, e.g.*, Salomé Viljoen, *A Relational Theory of Data Governance*, 131 YALE L.J. 573, 578 (2021) (arguing powerful technology companies' data-collection practices are aimed primarily at deriving population-level insights regarding how data subjects relate to others, and, therefore, laws prescribing individualistic remedies are insufficient as matter of good data governance).

[33] *See generally* RICHARDS, *supra* note 31; RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS (2008); Johanna Gunawan, Woodrow Hartzog & Neil Richards, *Dark Patterns as Disloyal Design*, IND. L.J. (forthcoming 2025).

[34] COHEN, BETWEEN TRUTH AND POWER, *supra* note 8, at 96.

[35] *Id.*; *see also* ZUBOFF, *supra* note 12, at 19-20.

[36] *See* NICHOLAS CARR, THE SHALLOWS: WHAT THE INTERNET IS DOING TO OUR BRAINS 194 (2019).

[37] *See, e.g.*, HARI, *supra* note 22, at 37-40. Psychologist Adam Alter has documented the steady decline of attention in his book *Irresistible*, which examines how technologies are made to be addictive using engagement strategies. He wrote: In 2000 Microsoft Canada reported that the average human had an attention span of twelve seconds; by 2013 that number had fallen to eight seconds. (According to Microsoft, a goldfish, by comparison, has an average attention span of nine seconds.) "Human attention is

are intentionally deployed. As Julie Cohen has explained, technology companies frequently deploy techniques of consumer influence derived from games (so-called "gamification") and even addiction research to boost engagement.[38] Addiction can be a powerful driver of engagement metrics.[39]

The first kind of focus jeopardized by engagement strategies is what some people call *spotlight* focus.[40] This is the kind of focus that allows people to devote attention to a single task or idea, with everything else just falling away, outside of the spotlight.[41] Engagement has been wrecking our spotlight focus for decades now, primarily by encouraging people to look at their phone (or a different app or website) while they are doing something else. "Multi-tasking" is a myth.[42] Humans are very single-minded creatures with limited connive resources. Neuroscientist Earl Miller has said "[y]our brain can only produce one or two thoughts" at a time in the conscious part of your mind.[43] The switching cost our brains must pay when we become distracted and juggle between tasks is enormous.[44] "Switching costs" are the time and effort required to refocus your brain on a new (or previous) task.[45] When you become distracted

> dwindling," the report declared. Seventy-seven percent of eighteen- to twenty-four-year-olds claimed that they reached for their phones before doing anything else when nothing is happening . . . . More worrying, still, Microsoft asked two thousand young adults to focus their attention on a string of numbers and letters that appeared on a computer screen. Those who spent less time on social media were far better at the task."

ALTER, *supra* note 24, at 28-29.

[38] COHEN, BETWEEN TRUTH AND POWER, *supra* note 8, at 80 (discussing "gamification"), 83 (discussing addiction).

[39] *See generally* ATLER, *supra* note 24; GAIA BERNSTEIN, UNWIRED (2023).

[40] HARI, *supra* note 22, at 98, 266.

[41] *Id.*

[42] Kevin P. Madore & Anthony D. Wagner, *Multicosts of Multitasking*, CEREBRUM, Mar.-Apr. 2019, at 1, 2. Psychologist Clifford Nass has said, "The research is almost unanimous, which is very rare in social science, and it says that people who chronically multitask show an enormous range of deficits. They're basically terrible at all sorts of cognitive tasks, including multitasking." *The Myth of Multitasking*, NPR (May 10, 2013, 1:00 PM), https://www.npr.org/2013/05/10/182861382/the-myth-of-multitasking [https://perma.cc/AU3X-2CKB].

[43] HARI, *supra* note 22, at 37.

[44] *Id.* at 38. In his book *Stolen Focus*, Johann Hari interviewed dozens of scientists who studied the degradation of attention and found that:

> what the scientists discovered is that, in fact, when people think they're doing several things at once, they're actually . . . juggling. They're switching back and forth. They don't notice the switching because their brain sort of papers it over, to give a seamless experience of consciousness, but what they're actually doing is switching and reconfiguring their brain moment to moment, task to task—[and] that comes with a cost.

Id.

[45] *Id.* ("Imagine you are doing your tax return and you receive a text, and you look at it—it's only a glance, taking five seconds—and then you go back to your tax return. In that moment, 'your brain has to reconfigure, when it goes from one task to another' . . . You have

by engagement strategies like notifications and designs made to keep you checking your phone, you're not just "losing the little bursts of time you spend looking at the texts—you are also losing the time it takes to refocus afterward, which can be much longer."[46]

The switching costs associated with losing focus through engagement strategies also makes us error prone. Johann Hari calls this the "screw up" effect, explaining how when someone switches "between tasks, errors that wouldn't have happened otherwise start to creep in, because . . . 'your brain is error-prone . . . your brain has to backtrack a little bit and pick up and figure out where it left off'—and it can't do that perfectly. Glitches start to occur."[47] Switching costs also diminish our memory, because we lose the space and energy to convert our experiences into memory.[48] To top it all off, engagement strategies that impose switching costs on people drain them of their creativity and deny their brains the ability to mull over everything it has absorbed and draw links between them.[49]

The second kind of attention that has been taken from us at least partially by engagement strategies is what we might perhaps counterintuitively call "mind-wandering focus." Have you ever noticed how your best ideas come to you when you are in the shower? Or how daydreaming often leads to insights to puzzles you've been trying to crack for months? It's no accident that isolation from constant stimuli is the best environment for ideas. Scholars have found significant evidence that the ability to give your brain a rest and let it wander is a key component for creativity and the development of new ideas.[50] Psychologist

to remember what you were doing before, and you have to remember what you thought about it, 'and that takes a little bit of time.' When this happens, the evidence shows that 'your performance drops. You're slower. All as a result of the switching.'").

[46] *Id.* at 38-39. There is some evidence the switching cost effect can be quite large. One study provided evidence that "technological distraction"—things like emails and messages—caused an average ten-point drop in workers' IQs. *Id.* at 39.

[47] *Id.* at 39.

[48] *Id.* at 39-40. A team at UCLA found evidence that multitaskers (those who had to switch between tasks) couldn't remember their actions as well as those who did one thing at a time. Hari wrote, "This seems to be because it takes mental space and energy to convert your experiences into memories, and if you are spending your energy instead on switching very fast, you'll remember and learn less." *Id.* at 40.

[49] *Id.* at 39-40. "Creativity drain" isn't noticeable in the short term and is really only felt in the medium or longer term. Miller posited that if you lack focus you're likely to be significantly less creative "[b]ecause where do new thoughts [and] innovation come from?" *Id.* (alteration in original). The answer, of course, is your brain, which shapes new ideas out of what you've observed. Hari wrote, "[y]our mind, given free undistracted time, will automatically think back over everything it absorbed, and it will start to draw links between them in new ways." *Id.* at 40.

[50] *Id.* at 95. Hari interviewed neurologists and psychologists who research this area and concluded that mind wandering is critically important for people for three reasons. First, it helps people make sense of the world. Hari wrote:

Jonathan Smallwood found that "the more you let your mind wander, the better you are at having organized personal goals, being creative, and making patient, long-term decisions. You will be able to do these things better if you let your mind drift, and slowly, unconsciously, make sense of your life."[51] Letting our mind wander is how we solve problems and prepare for the future because our brains are relieved of the burden of focusing on what's in front of us.[52] And like spotlight focus, mind-wandering focus is jeopardized by engagement-driven services and tools when they demand our attention.[53]

What all this boils down to is that when companies seek to maximize engagement, they are interfering with people's abilities to focus on one thing for a sustained period of time (spotlight focus) and their ability to engage in the kind of mind wandering that is essential for people to make sense of the world, draw important connections between things to solve problems, and prepare for the future (mind-wandering focus).[54]

The research on our ability to focus paints a bleak picture, suggesting that as firms get better at driving engagement, such as through short-form video formats like TikTok, the costs borne by the engaged only increase, and those costs often fall more heavily on the vulnerable. Risk of "TikTok use disorder," a condition shown to lead to memory loss in teens in a 2021 study, is particularly damaging to focus, and particularly for young minds.[55] Additionally, short-form video platforms that operate on an endless scroll model to increase engagement are extremely popular among teens. Pew Research Center reported in 2022 that 95% of teens use YouTube, 67% of teens use TikTok, and 62% of teens use

> When you read a book—as you are doing now—you obviously focus on the individual words and sentences, but there's always a little bit of your mind that is wandering. You are thinking about how these words relate to your own life. You are thinking about how these sentences relate to what I said in previous chapters. You are thinking about what I might say next. You are wondering if what I am saying is full of contradictions, or whether it will all come together in the end.

Id.

[51] *Id.* at 96.

[52] *Id.* Neurology professor Nathan Spreng has said that "'[c]reativity is not [where you create] some new thing that's emerged from your brain. . . . It's a new association between two things that were already there.' Mind wandering allows 'more extended trains of thought to unfold, which allows for more associations to be made.'" *Id.*

[53] *Id.* at 98.

[54] *Id.* at 40. Hari summed up the costs of engagement-driven switching, saying "So if you spend your time switching a lot, then the evidence suggests you will be slower, you'll make more mistakes, you'll be less creative, and you'll remember less of what you do." *Id.*

[55] Peng Sha & Xiaoyu Dong, *Research on Adolescents Regarding the Indirect Effect of Depression, Anxiety, and Stress Between TikTok Use Disorder and Memory Loss*, INT'L J. ENV'T RSCH. & PUB. HEALTH, 2021, at 1-2 (finding TikTok use disorder also correlates with anxiety, depression, and increased stress).

Instagram.[56] It estimates that 58% of U.S. teens use TikTok every day, and 86% of teen TikTok users reported that they were on the application every day.[57] Parents have even reported that teens and children "can't sit through feature length films," let alone focus on schoolwork and interpersonal relationships.[58] In a comprehensive and detailed report on social media and adolescent health, the National Academy of Sciences found upon reviewing the relevant literature that "[t]he platforms . . . have a distracting power that can conflict with an important developmental window for cultivation of attentional control, a skill necessary for academic success and emotional adjustment. Social media use may reduce adolescents' ability to sustain attention and suppress distraction, key components of concentration."[59]

Short-form video-based platforms have proven to be far more addictive than traditional photo or text based platforms like X, Facebook, or pre-Meta Instagram. Arvind Narayanan has argued that TikTok in particular has mastered keeping people glued to screens through a combination of effortless scrolling, a focus on vertical videos, an emphasis on content over subscriptions, and curious algorithms.[60] And as firms like TikTok garner greater shares of attention, other platforms compete with short-form, endless-scroll videos of their own.[61] Therefore, it is vital to reframe the way we regulate engagement to protect our focus, particularly that of young people whose brains are still developing.

Of course, the effects of engagement are borne by adults as well. One study found that "the average American worker is distracted roughly once every three minutes."[62] Another provided evidence that most people don't have a single uninterrupted hour in a normal day, at every level of the workplace.[63] Phones crammed with every kind of engagement-producing feature imaginable are driving much of this. A study conducted at Carnegie Mellon University's Human

[56] Emily A. Vogels, Risa Gelles-Watnick & Navid Massarat, *Teens, Social Media and Technology 2022*, PEW RSCH. CTR. (Aug. 10, 2022), https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/ [https://perma.cc/G569-N2XV] (highlighting change in social media landscape over last decade).

[57] *Id.* (noting 16% of teen TikTok users report using TikTok "almost constantly").

[58] Julie Jargon, *TikTok Brain Explained: Why Some Kids Seem Hooked on Social Video Feeds*, WALL ST. J. (Apr. 2, 2022, 9:00 AM), https://www.wsj.com/articles/tiktok-brain-explained-why-some-kids-seem-hooked-on-social-video-feeds-11648866192.

[59] *Id.* ("At the same time, it is difficult to say that the distraction posed by social media is a function of the media or of the distraction inherent in reading on screens and the related incitements to multitask.").

[60] Arvind Narayanan, *TikTok's Secret Sauce*, KNIGHT FIRST AMEND. INST. AT COLUMBIA UNIV. (Dec. 15, 2022), https://knightcolumbia.org/blog/tiktoks-secret-sauce.

[61] Shannon Bond, *Facebook Launches Instagram Reels, Hoping to Lure TikTok Users*, NPR (Aug. 5, 2020, 1:32 PM), https://www.npr.org/2020/08/05/899319721/facebook-launches-reels-hoping-to-lure-tiktok-users [https://perma.cc/Q3PR-4VHG].

[62] Jargon, *supra* note 58.

[63] HARI, *supra* note 22, at 40-41 (explaining how rare uninterrupted time is for American workers).

Computer Interaction Lab showed that students who took a test with their phones turned on and who were able to receive messages performed, on average, 20% worse than those students who had their phones switched off.[64] Moreover, many workplaces *require* phones to be at hand in order to perform job functions or to authenticate two-factor network security systems. Both the evidence and the logic of engagement strategies thus support the idea that companies are leveraging strategies that are wrecking our ability to focus and enter into what scholars have called "flow states," which leave us impoverished as individuals and, as a society, denied deeper, more creative, and more meaningful contributions.

C. *Mental Health and Relationships*

On October 4, 2021 before the Senate Commerce Subcommittee on Consumer Protection, Product Safety, and Data Security, Frances Haugen, a former Facebook product manager, testified to what many had suspected for quite some time: certain aspects of social media are significantly detrimental to people's mental health, particularly teens, and the companies know it.[65] Haugen had previously leaked internal company documents showing how Facebook prioritized growth and engagement at the expense of the well-being both of its human customers and of society as a whole.[66]

The link between social media, phones and other screens, and people's overall mental health is complex and contested.[67] However, there is good reason to think that engagement strategies have at least *some* corrosive effect on our mental well-being and relationships.[68] In a speech about the impact of social media on the health of adolescents, FTC Commissioner Alvaro Bedoya said:

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[64] *Id.* at 41.

[65] *Statement of Frances Haugen*, U.S. SEN. COMM. ON COM., SCI. & TRANSP. (Oct. 4, 2021), https://www.commerce.senate.gov/services/files/FC8A558E-824E-4914-BEDB-3A7B1190BD49 [https://perma.cc/7Z56-LVNC] ("[Facebook's] profit optimizing machine is generating self-harm and self-hate—especially for vulnerable groups, like teenage girls." (quoting from testimony pdf located on website).

[66] Kari Paul & Dan Milmo, *Facebook Putting Profit Before Public Good, Says Whistleblower Frances Haugen*, GUARDIAN (Oct. 4, 2021 4:35 PM), https://www.theguardian.com/technology/2021/oct/03/former-facebook-employee-frances-haugen-identifies-herself-as-whistleblower [https://perma.cc/JYC8-4W5E].

[67] *See generally* NATIONAL ACADEMIES OF SCIENCE, SOCIAL MEDIA AND ADOLESCENCE HEALTH (2023) [hereinafter SOCIAL MEDIA AND ADOLESCENCE HEALTH].

[68] Alvaro M. Bedoya, Comm'r, Fed. Trade Comm'n, Prepared Remarks at the National Academies of Sciences, Engineering & Medicine Meetings of the Committee on the Impact of Social Media on the Health and Wellbeing of Children and Adolescents (Feb. 7, 2023) (available at https://www.ftc.gov/system/files/ftc_gov/pdf/national-academies-speech-bedoya.pdf) ("I spent most of the last 15 years in the world of technology policy and research, first in government and then in the academy and at an NGO. When I talk about the relationship between social media and teen mental health with friends and former colleagues, one of the first questions I get is: 'Is this real – or is it just another moral panic? Don't we need more

> By my reckoning, there is at least eight years of peer-reviewed scientific research on the impact of smartphone-enabled social media on the adolescent brain That body of literature is nuanced. For example, the relationships between mood disorders and social media use may run in both directions. And the results of that research vary depending on what exactly is being measured, the exact population being evaluated, and the time period in question. Unfortunately, some research lumps in social media use with other forms of screen time, or fails to account for gender, or looks at behavior from before 2010, when contemporary patterns of social media use had yet to develop. But there are trends. For example, a series of cross-sectional and longitudinal studies suggests that teenagers, particularly teenage girls, who spend more than two or three hours a day on social media, suffer from increased rates of depression, anxiety, and suicidal ideation. A separate set of studies have linked the use of photo-rich social media to increased incidence of eating disorders.[69]

Engagement strategies are designed to get people to spend more time on their phones, which is already a problem.[70] Psychologist Adam Alter explains that:

> Most people spend between one and four hours on their phones each day—and many far longer. . . . Over the average lifetime, that amounts to a staggering *eleven years*. On average they were also picking up their phones about three times an hour. This sort of overuse is so prevalent that researchers have coined the term "nomophobia" to describe the fear of being without mobile phone contact (an abbreviation of "no-mobile-phobia").[71]

Research shows that the mere presence of phones is actually harmful, frustrating meaningful human connection and interfering with our ability to be empathetic and trust others.[72] Alter wrote, "Phones are disruptive by their mere existence, even when they aren't in active use. They're distracting because they remind of us the world beyond the immediate conversation, and the only solution, the

time to tell? Don't we need more research? Is this real?' My answer to that question is *yes*. It is real.").

[69] Bedoya, *supra* note 68, at 4.

[70] *See* discussion *supra* notes 15-18 (illustrating engagement models pursued by digital platforms to enhance duration, frequency, and depth of user interactions); SOCIAL MEDIA AND ADOLESCENT HEALTH , *supra* note 67, at 36, 45 ("The limited efficacy of platform algorithms and their potential to create distortions can give rise to recursive feedback loops for users. Although the algorithms' goal may be the relatively innocuous, the manner in which the content is presented can be a source of harm. An emphasis on maximizing user engagement, discussed later in this chapter, may be at the root of the problem, as algorithms sort content based on users' history, favoring the material to which users have responded in the past. The most sensational and provocative posts are often given the highest priority for this reason, exposing users to a narrow range of content that reinforces their existing beliefs and interests, encouraging recursive feedback loops." (internal citations omitted)).

[71] ALTER, *supra* note 22, at 15.

[72] *Id.* at 15-16.

researchers [of this study on the harmful presence of smartphones] wrote, is to remove them completely."[73] Research has shown that nearly half of people:

> [C]ouldn't bear to live without their smartphones (some would rather suffer physical injury than an injury to their phones) . . . . Up to 59 percent of people say they're dependent on social media sites and that their reliance on these sites ultimately makes them unhappy. Of that group, half say they need to check those sites at least once an hour. After an hour, they are anxious, agitated, and incapable of concentrating.[74]

According to another research study, one-third of respondents indicated a preference to give up sex rather than be deprived of their phones.[75]

Engagement strategies have started to affect our well-being from the moment we first encounter digital technologies as children. Psychologist Catherine Steiner-Adair has noted that many American children's first digital encounter happens when they observe their parents "missing in action" when they are staring at their phones, tablets, and laptops.[76] Alter explains how "[p]arents with younger kids do even more damage when they constantly check their phones and tablets. Using head-mounted cameras, researchers have shown that infants instinctively follow their parents' eyes. Distracted parents cultivate distracted children, because parents who can't focus teach their children the same attentional patterns."[77] Moreover:

The ability of children to sustain attention is known as a strong indicator for later success in areas such as language acquisition, problem-solving, and other key cognitive development milestones. Caregivers who appear distracted or whose eyes wander a lot while their children play appear to negatively affect infants' burgeoning attention spans during a key stage of development.[78]

Beyond the risks of parental distraction, the rise engagement economy has been accompanied by a sharp decline in young people's mental health.[79] While

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[73] *Id.* at 16.

[74] *Id.* at 27-28.

[75] Jane E. Brody, *Hooked on Our Smartphones*, N.Y. TIMES (Jan. 9, 2017), https://www.nytimes.com/2017/01/09/well/live/hooked-on-our-smartphones.html (highlighting extent to which smartphones have negatively transformed modern society); Athima Chansanchai, *Survey: One-Third Would Rather Give Up Sex than Phone*, NBC NEWS (Aug. 4, 2011, 11:03 AM), https://www.nbcnews.com/news/world/survey-one-third-would-rather-give-sex-phone-flna121757 [https://perma.cc/Q2WQ-CLYJ] (explaining findings of national survey on respondents' attachments to mobile phones).

[76] ALTER, *supra* note 24, at 39 (citing CATHERINE STEINER-ADAIR, THE BIG DISCONNECT (2013)) (introducing Steiner-Adair's study to explain how parents' constant engagement with digital devices can affect their children).

[77] ALTER, *supra* note 24, at 39-40.

[78] *Id.* at 40.

[79] *See, e.g.*, SOCIAL MEDIA AND ADOLESCENT HEALTH, *supra* note 67, at 1 ("As smartphones have gained popularity, mental health among young people has declined. Teens' use of social media is one of the more widely cited explanations for the observed deterioration in youth mental health.").

we recognize that correlation doesn't equal causation, the National Academy of Sciences stated in their report on social media and teens mental health that

> The committee's review of the literature did not support the conclusion that social media causes changes in adolescent health at the population level. Nevertheless, there are potential harms associated with the platforms such as the ability to encourage unhealthy social comparisons, especially for teens who are inclined to view others as somehow better off than themselves.[80]

Additionally, the committee found "Social media use can also displace time that could otherwise be given to sleep, exercise, studying, or other hobbies. A serious consequence in its own right, sleep loss is also a risk factor for depression, mood disturbances, injuries, attention problems, and excessive weight gain."[81] Teens keep coming back for more, with devastating mental health consequences, while companies like ByteDance profit. One 2021 Chinese study recorded increased rates of depression, anxiety, and stress among the 3,036 teenage active users of TikTok they surveyed.[82] The study also discusses the concept of "non-chemical addiction," a concept that has been a part of critical conversation since 1990 and is particularly relevant in behavioral analyses of TikTok users.[83] While it is true that people can get distracted by many things,

[80] *Id.* ("Social comparison may play a role in some teens body image problems and has been proposed as a risk factor for eating disorders. . . . Studies looking at the association between social media use and feelings of sadness over time have largely found small to no effects, but people with clinically meaningful depression may engage with social media differently. Some research has proposed that this relation is circular, with people with more symptoms of depression spending more time using social media and social media use predicting risk of depression. At the same time, the relation between social media use and depression might vary among different demographic or identity groups. Among LGBTQ+ teens, for example, social media use is associated with fewer depressive symptoms but an increased risk of bullying. Heavy users of online video games can develop a dysfunctional behavior related to games, characterized by a persistent pattern of impaired control over the need to play, to the point where gaming takes precedence over all other life activities. Given that gaming disorder is defined by dysfunction, it is not surprising that many studies find evidence that the disorder predicts depression, anxiety, social phobia, poor school performance, sleep disruption, and poor relationships with parents and peers. Although less well studied, a dysfunctional use of social media appears to be a similar problem. It is currently unclear whether problematic social media use and gaming disorder are distinct disorders or are simply different manifestations of a similar disordered use of technology."). *But see* Candice L. Odgers, *The Great Rewiring: Is Social Media Really Behind An Epidemic of Teenage Mental Illness?*, NATURE (Mar. 29, 2024, 10:29 AM), https://www.nature.com/articles/d41586-024-00902-2; Judith Warner, *The Kids Aren't All Right. Are Phones Really to Blame?*, WASH. POST (Mar. 22, 2024), https://www.washingtonpost.com/books/2024/03/22/anxious-generation-rewiring-childhood-jonathan-haidt-review/.

[81] SOCIAL MEDIA AND ADOLESCENT HEALTH, *supra* note 67.

[82] Sha & Dong, *supra* note 55, at 9 (concluding TikTok use disorder "is positively linked to memory loss, and it is also positively linked to depression, anxiety, and stress").

[83] *Id.* at 1.

there is something unique about engagement-laden digital screens and devices that make it worthy of exceptional treatment. Alter notes how:

> Online interactions aren't just different from real-world interactions; they're measurably worse. Humans learn empathy and understanding by watching how their actions affect other people. Empathy can't flourish without immediate feedback, and it's a very slow-developing skill. One analysis of seventy-two studies found that empathy has declined among college students between 1979 and 2009. They're less likely to take the perspective of other people and show less concern for others.[84]

Channeling most communication through social media and text messaging discourages directness and is not helpful in the long run. Steiner-Adair said, "Texting is the worst possible training ground for anyone aspiring to a mature, loving, sensitive relationship."[85] Engagement strategies are meant to keep people on the screen, instead of encouraging less quantified but more meaningful interactions beyond the app.[86] Texts are engagement, but only those connections mediated by the app. Any connection that is not app mediated is not.

D. *The Public Sphere*

While in this Article we have focused primarily on engagement's threats to privacy, attention, and mental health, engagement strategies also extract labor unfairly, threaten our democratic institutions, and jeopardize our ability to self-govern. Engagement algorithms that prioritize engagement over truth, dignity, and meaning also impoverish the public sphere and our cultural development. The ideology of engagement may talk in terms of human connection, the "new public square," and absolutist commitments to free expression, but its reality is somewhat different. Under the ideology of engagement, what matters is the *quantity* of political engagement rather than its *quality* or its effect on the civic fabric of our polity. Few emotions are more engaging than outrage, which is why engagement creates a toxic forum for the discussion of public issues.

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[84] ALTER, *supra* note 24, at 40 (comparing that figure to boys where only "one in eleven boys aged twelve to thirteen, and one in six boys aged fourteen to seventeen" say people their age are mostly unkind to one another on social network sites).

[85] *Id.* at 41.

[86] Professors Brett Frischmann and Evan Selinger have theorized that some engagement strategies that seek to make communicating *easier* by reducing friction and predicting responses actually make our communication (and thus our relationships developed by our interactions) less meaningful by stripping away the breadth of the signal and the related effort and thoughtfulness in gratuitously expending labor on someone else's behalf. They argued that appropriate social responses can "require more attuned engagement than commodified environments are designed to facilitate." BRETT FRISCHMANN & EVAN SELINGER, RE-ENGINEERING HUMANITY 161-65 (2018) (criticizing possible inventions in automated sentiment analysis as outsourcing emotional labor).

Engagement also encourages digital mobs, which can lead to overreaction (retweets and likes) and create incentives for collective vigilantes.[87]

Engagement models also poison our informational environment with disinformation. While engagement treats all information equally, addictive content and rabbit holes have proven to be especially valuable as they inhibit people's abilities to put their phones down and do something else.[88]

Platforms that prioritize short-form video feeds with endless scroll enabled are particularly dangerous for our democratic institutions and for truth.[89] The economic incentive to maximize engagement and keep users on the app as long as possible pushes content that is most outrageous or the user is likely to agree with, which can lead to radicalization, the rise of conspiracy theories, and mis/disinformation online. Arvind Narayanan has argued TikTok's interface design choices (even more so than its algorithmic optimization) are the key to its success in keeping people glued to the screen.[90] The key is its scrolling paradigm for interacting with content. He explains that "[e]liminating conscious decision-making from the user experience means that videos that cater to our basest impulses do relatively well on TikTok, because people will watch these videos if they show up in their feed but won't explicitly click on them."[91] The same choices that optimize engagement also optimize misinformation, which can be disastrous for our democracy.[92] Finally, as the Cambridge Analytica scandal revealed, by segmenting and surveilling us, engagement can create opportunities both for political microtargeting and the deployment of psychological warfare techniques through political advertising tailored to the

[87] *See* DANIELLE KEATS CITRON, THE FIGHT FOR PRIVACY: PROTECTING DIGNITY, IDENTITY AND LOVE IN THE DIGITAL AGE 37-40 (2022) (arguing websites have embraced and contributed to normalization of vulgar attitudes and behaviors through their engagement structures).

[88] *See* William Brady & The Conversation US, *Social Media Algorithms Warp How People Learn from Each Other*, SCI. AM. (Aug. 25, 2023), https://www.scientificamerican.com/article/social-media-algorithms-warp-how-people-learn-from-each-other/ [https://perma.cc/26L5-K6C4] (noting social media platforms are intentionally designed to amplify divisive information that encourages prolonged engagement).

[89] *See* Jonathan Haidt, *Yes, Social Media Really Is Undermining Democracy*, ATLANTIC (July 28, 2022), https://www.theatlantic.com/ideas/archive/2022/07/social-media-harm-facebook-meta-response/670975/ (contending viral nature information spreads and is consumed has directly contributed to level of political polarization dangerous for democracy).

[90] Arvind Narayanan, *supra* note 60 (arguing TikTok's success is better attributed to its addictive design rather than its algorithm).

[91] *Id.*

[92] Benjamin Kaiser & Jonathan Mayer, *It's the Algorithm: A Large Scale Comparative Field Study of Misinformation Interventions*, KNIGHT FIRST AMEND. INST. (Oct. 23, 2023), https://knightcolumbia.org/content/its-the-algorithm-a-large-scale-comparative-field-study-of-misinformation-interventions [https://perma.cc/45PV-8XKY] (contending decisions platforms make with regards to misinformation and problematic content "can undermine democracies, empower authoritarians, and lead to violence and genocide").

known psychological vulnerabilities that all data collection can reveal.[93] Whether targeting or simply making bad recommendations less annoying, engagement paradigms have proven corrosive to us as individuals, groups, and the polity.

III. TOWARD A WRONGFUL-ENGAGEMENT DOCTRINE

So far, we have made the case for lawmakers to take engagement seriously as a distinct and dangerous concept. In this Section, we propose that lawmakers should both address the root business incentives driving engagement strategies and make the case for a legal doctrine of "wrongful engagement." At this point, we should make clear that engagement is not always a wrong, and not all engagement should be discouraged. Losing oneself in a book, album, film, or video game can also be beneficial engagement with culture. Even practices like requesting feedback can (when deployed appropriately) be mutually beneficial. Many engagement strategies are also narrowly tailored to reinforce the basic function of a service.[94] Others help people achieve individually and socially valuable goals, like saving money or learning a new language.

The challenge for lawmakers will be to limit the kinds of unnecessary engagement strategies that seek to wrongfully commodify human experiences at the expense of people's well-being and social cohesion. This is a difficult, but we think possible and worthwhile endeavor. It can be hard to distinguish between the kinds of influence that one might reluctantly agree are an acceptable part of living in society, like advertisements and social pressure, and the wrongful systemic engineering of behavior. This Section attempts to explain how to separate these two categories at both a conceptual and practical level.

First, any meaningful legal response to engagement strategies should target the business incentives that drive them, including surveillance advertising, the platform economy, and broader capitalistic pathologies. In other words, you can't solve engagement without confronting the foundations of informational capitalism. This will mean broadly leveraging every relevant legal framework, including privacy, antitrust, public health, and others. That's a huge, but critical lift. A good start would be aggressive and clear data minimization and purpose limitation rules and prohibitions on surveillance advertising.[95] But we also propose that lawmakers directly tackle engagement as a legal wrong.

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[93] RICHARDS, *supra* note 31, at 151-57; *see also* Frederik J. Zuiderveen Borgesius et al., *Online Political Microtargeting: Promises and Threats for Democracy*, 14 UTRECHT L. REV. 82, 87-96 (2018); *'The Great Hack': Cambridge Analytica Is Just the Tip of the Iceberg*, AMNESTY INT'L (July 24, 2019), https://www.amnesty.org/en/latest/news/2019/07/the-great-hack-facebook-cambridge-analytica/ [https://perma.cc/9QJB-G9L3].

[94] Christopher Mims, *How Netflix's Algorithms and Tech Feed Its Success*, WALL ST. J. (July 28, 2023, 9:00 PM), https://www.wsj.com/articles/how-netflixs-algorithms-and-tech-feed-its-success-90632b92 (noting Netflix's recommendation engagement strategy enhances "user experience" by providing personalized content recommendations that make it easier for users to discover new entertainment options).

[95] For more examples, see ACCOUNTABLE TECH, ZERO TRUST FRAMEWORK (2023).

If engagement is to be considered a legal wrong, then lawmakers must clearly articulate *what* actions can be considered wrongful, *when* those actions are wrongful, and *why* those actions are wrongful. To be helpful as a construct that works across different legal frameworks, wrongful engagement must be articulated in a relatively broad way. Detailed rules in specific contexts can refine and serve to inhibit targeted wrongful engagement practices, with the general notion of engagement as a legal wrong working to guide interpretation and, in some cases, as a catchall.

To that end, we propose the following: *Engagement is a legal wrong when organizations process data or design tools to influence people's participation in an online service in an unfair, deceptive, or abusive way.* This definition has three different parts, which are worth a little extra explanation:

1. Processing data or designing tools
2. To influence people's participation in an online service
3. In an unfair, deceptive, or abusive way.

First, there's the wrongful act. Because engagement strategies commonly seek and then exploit personal information, the first kind of act the law should scrutinize for wrongful engagement practices is the processing of human information. Here we mean "processing" in the broadest, GDPR-like sense—any operation performed on personal data.[96] Data is processed when it determines the online content people view, and when it is collected from people interacting with apps, websites, and devices by browsing, clicking push notifications, and entering text. But engagement involves more than just data processing, or else data protection rules might be all we need.[97] Engagement also involves the *design* of tools, features, and services that are meant to extract attention, money, and labor. This includes, for example, infinite scrolls,

[96] *See* Commission Regulation (EU) 2016/679, General Data Protection Regulation ("GDPR"), art. 4, 2016 O.J. (L 119) (defining "processing" as "any operation or set of operations which is performed on personal data or on sets of personal data, whether or not by automated means, such as collection, recording, organisation, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, restriction, erasure or destruction").

[97] *See* Ryan Calo, *Digital Market Manipulation*, 82 GEO. WASH. L. REV. 995, 1003-18 (2014) (arguing emerging technologies and marketing techniques challenge limits of existing consumer protection laws by uniquely allowing corporations to exploit consumers' abilities to pursue their own self-interests); COHEN, BETWEEN TRUTH AND POWER, *supra* note 8, at 170-201 (describing how transition to informational mode of development "has created existential challenges for regulatory models and constructs developed in the context of the industrial economy"); ARI EZRA WALDMAN, INDUSTRY UNBOUND: THE INSIDE STORY OF PRIVACY, DATA, AND CORPORATE POWER 99-161 (Cambridge Univ. Press 2021) (highlighting how tech companies have actively undermined push for comprehensive national information privacy laws); Woodrow Hartzog & Neil Richards, *Privacy's Constitutional Moment and the Limits of Data Protection*, 61 B.C. L. REV. 1687, 1738 (2020) (contending nature of current personal data-driven society requires regulation "concerned with how the power created and distributed by personal data is obtained and exploited").

incessant notifications, confusing interfaces, and roving "x" buttons on ads that are all deployed to keep us surfing, scrolling, and spending, particularly where these techniques deploy the lessons of behavioral science, "gamification," or addiction research. Confronting engagement means addressing power-imbalanced information relationships and the affordances of digital tools that make all kinds of new human actions easier (or harder).[98]

Second, data processing and design should be scrutinized for wrongful engagement when those actions seek to influence people's participation in an online service. By "influence," we mean "to have an effect on a person's behavior. While this notion of influence certainly includes attempts at manipulation, helpfully conceptualized by Daniel Susser, Beate Roessler, and Helen Nissenbaum as "hidden influence,"[99] we argue that overt attempts to increase engagement can also be wrongful. By "participation," we are referring to the time people spend on the service, the frequency they interact with the service, and the depth of their exposure to the engager and third parties. Conceptualizing participation in terms of broad engagement metrics provides helpful flexibility to distinguish noninteractive behavior from behavior that creates financial incentives for companies. It also is a more accurate way to scrutinize context than an arid recitation of activities such as clicks, scrolls, swipes, and text entry.

Finally, engagement is wrongful when it is *unfair, deceptive, or abusive*. This framing calls immediately to consumer protection regimes, but it is broad enough to also draw upon "fairness" (and proportionality) doctrines in data protection law and duties of loyalty and care in relational rules.[100] While harm articulations can be tricky, we emphasize the betrayal of trust at the heart of engagement strategies in many information relationships.[101]

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[98] *See generally* WOODROW HARTZOG, PRIVACY'S BLUEPRINT: THE BATTLE TO CONTROL THE DESIGN OF NEW TECHNOLOGIES (2018) (calling for privacy protections responsive to technological design).

[99] Daniel Susser, Beate Roessler & Helen Nissenbaum, *Online Manipulation: Hidden Influences in a Digital World*, 4 GEO. L. TECH. REV. 1, 3 (2019) ("[A]t its core, manipulation is hidden influence—the covert subversion of another person's decision-making power.").

[100] People are uniquely exposed and at an extreme power disadvantage in their relationships with companies that seek to maximize engagement, particularly large tech platforms. Previously, we have argued that:

> The relationship between people and platforms has at least five traits that, when combined, make it highly imbalanced and worthy of intervention at the relational level: the relationship (1) is ongoing, (2) is high frequency, (3) occurs within an interactive environment,(4) operates within an environment completely constructed for the individual, and(5) operates within an environment that is responsive to the individual by the dominant party.

Woodrow Hartzog & Neil Richards, *The Surprising Virtues of Data Loyalty*, 71 EMORY L.J. 985, 996 (2022) (emphasis omitted).

[101] Richards & Hartzog, *Taking Trust Seriously*, *supra* note 11, at 457 (articulating importance of trust to privacy law); Richards & Hartzog, *Relational Turn*, *supra* note 11, at

Similarly, lawmakers should consider the collective, societal harms of reduced "friction" and nudging strategies to properly assess their overall effect in tandem with their immediate convenience and efficiency benefits.[102] Some of the approaches will also require difficult balancing tests. Lawmakers should analyze risks and benefits at scale and over time, rather than in an atomistic and discrete way.[103]

Lawmakers and judges do not need to create an entirely new legal framework to mark engagement as a legal wrong. Existing frameworks might all be well positioned to incorporate anti-engagement rules. Gambling law provides an interesting route, because many of the most popular engagement strategies utilize the same strategies as slot machines, like goals, feedback, progress, escalation, and cliffhangers.[104] Kyle Langvardt has argued that "gambling commissions are already well positioned to regulate some of the most habit-forming monetization mechanics in gaming today."[105]

Consumer protection law might also be effectively leveraged as an anti-engagement framework. The Federal Trade Commission has frequently used its authority under Section 5 of the Federal Trade Commission Act ("FTC Act") to regulate unfair and deceptive trade practices.[106] Indeed, the FTC has made great strides in this area recently, such as its enforcement against the software company Epic Games, which created manipulative purchasing interfaces in its popular video game *Fortnite* that caused many young people to accidentally or otherwise purchase things they (or their parents) did not intend.[107] Other initiatives have pursued companies for creating models and interfaces that

494 (calling for greater attention to relational duties in data protection law); Hartzog & Richards, *Surprising Virtues*, *supra* note 11, at 988 (advocating for duty of loyalty in privacy law and addressing critiques); Hartzog & Richards, *Legislating Data Loyalty*, *supra* note 11, at 358 (offering roadmap for legislative loyalty duties in privacy law).

[102] *See* FRISCHMANN & SELINGER, *supra* note 86, at 141, 158-59 (discussing realities of reducing "friction" in communication and technology) HARTZOG, *supra* note 98, at 126-30 ("The most important lessons privacy law can borrow from product safety law are its risk-utility balancing requirements . . . ."); Neil M. Richards, *The Perils of Social Reading*, 101 GEO. L.J 689, 712 (2013) (cautioning about dangers of "frictionless sharing" through social networks); William McGeveran, *The Law of Friction*, 2013 U. CHI. LEGAL F. 15, 17 (same).

[103] Mark P. McKenna & Woodrow Hartzog, Taking Scale Seriously in Technology Law (unpublished manuscript) (on file with authors).

[104] Kyle Langvardt, *Regulating Habit-Forming Technology*, 88 FORDHAM L. REV. 129, 160-64 (2019) ("Gambling in most jurisdictions, both in the United States and abroad, is defined by three elements: first, the gambler must 'stake or risk something of value'; second, 'chance is a material factor'; finally, 'successful play is rewarded by something of value.' These elements can be satisfied just as well in an online setting as in a traditional offline setting, and many jurisdictions already regulate online gambling." (citation omitted)).

[105] *Id.* at 164.

[106] *Id.* at 164-66 (describing how FTC deceptive practices enforcement may offer framework for policing habit-forming mobile apps for children).

[107] *See* Epic Games, No. 1923203, F.T.C. (Sept. 19, 2023) (enjoining Epic Games from, inter alia, billing any account without express, informed consent of accountholder).

encourage the purchase of "loot boxes," a form of gambling often targeted at children in games like EA's FIFA soccer game.[108]

Yet consumer protection law has struggled to come to terms with engagement models. While commercial deception enforcement remains a strong check on corporate misbehavior, it requires a material misrepresentation to be actionable. Engagement strategies that rest on vague assertions of grand bargain might struggle to fall within strict understandings of "material misrepresentation" (even though vague or even truthful statements of the fact of engagement are arguably deceptive).[109] At the same time, the harms we have articulated represent the kind of "substantial injury" required to prove commercial unfairness under the standards of the FTC and other state laws; moreover, firms could potentially argue that the benefits of "free" services represent the kind of countervailing "benefit to consumers or to competition" that would preclude liability under Section Five of the FTC Act.[110] In this vein, we are encouraged by recent developments in both consumer credit law and state consumer protection law. Both the 2009 Dodd-Frank Act and Maryland consumer protection law prohibit "abusive" trade practices: practices that interfere with a consumer's ability to make rational decisions, such as many of the tricks of engagement models we have already discussed.[111] More work will be needed both to flesh out such frameworks and to effectively deploy them against engagement models, but we believe that the approach we outline here has the potential both to identify harmful engagement models and to bring many of their more addictive and destructive tendencies within the rule of law.

CONCLUSION

For all the talk of "disruptive engagement" in technology circles, technologists seem to think that disruption is something that is better done to someone else. And for good reason. Disruption can be profitable, and engagement has certainly been both of these things. Engagement has certainly unsettled business models, but it has also disrupted our privacy, our focus, our

[108] *See, e.g.*, FED. TRADE COMM'N, FTC VIDEO GAME LOOT BOX WORKSHOP 5 (2020), https://www.ftc.gov/system/files/documents/reports/staff-perspective-paper-loot-box-workshop/loot_box_workshop_staff_perspective.pdf [https://perma.cc/69YP-3C9Y].

[109] Chris Jay Hoofnagle & Jan Whittington, *Free: Accounting for the Costs of the Internet's Most Popular Price*, 61 UCLA L. REV. 606, 608-09 (2014) ("Current governance structures allow firms to ignore consumer preferences for privacy and collect valuable information about consumers, all while fostering the perception of a free transaction.").

[110] 15 U.S.C. § 45(n) (establishing standard of proof and public policy considerations required for FTC adjudications).

[111] *See* RICHARDS, *supra* note 31, at 196 ("[T]he Dodd-Frank Act passed in the aftermath of the financial meltdown in 2009 gives the Consumer Financial Protection Bureau the ability to prohibit 'abusive' trade practices that interfere with a consumer's ability to make rational decisions."); HARTZOG, *supra* note 98, at 145 ("[P]rivacy law should ask whether a particular design interferes with our understanding of risks or exploits our vulnerabilities in unreasonable ways with respect to our personal information.").

mental health, and our democracy. Engagement models might be more effective than other models at driving out competition in some markets, but for a model that touts its price as "free," engagement has been very expensive—so expensive in fact that our privacy, our sanity, and our democracy do not appear capable of affording it. As we have argued, we believe not only that engagement models are too dangerous and costly to be allowed to persist in their current *laissez-faire* form, but that a focus on the model itself offers a helpful lens to perceive where we might usefully minimize some of the dangers of informational and surveillance capitalism, while preserving some of the undeniable benefits of digital technologies. In that direction, we believe, lies the potential for fruitful reform in everyone's benefit.