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ARTICLE

PRIVACY AS A MATTER OF PUBLIC HEALTH

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This Article examines the striking parallels between contemporary privacy challenges and past public health crises involving tobacco, processed foods, and opioids. Despite surging state and federal privacy legislation, many of these new privacy law and policy activities follow familiar patterns: an emphasis on individual choice, narrowly defined rights and remedies, and a lack of holistic accounting of how privacy incursions affect society as a whole. We argue instead for a salutary shift in privacy law and advocacy: understanding privacy through the lens of public health.

By tracing systemic factors that allowed industries to repeatedly subvert public welfare—from information asymmetries and regulatory capture to narratives of individual responsibility—we explore a fundamental rethinking of privacy protection. Our analysis of case studies reveals remarkable similarities between public health challenges of the past half-century or so and the ongoing consumer privacy crisis. We explore how public health frameworks emphasizing preventative policies and reshaping social norms around individual choices could inform privacy advocacy. To do so, we examine a spectrum of proposals to align privacy with public health, from adopting public health insights to provocatively reframing privacy violations as an epidemic threatening basic wellbeing.

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This Article offers a novel framework for addressing the current privacy crisis, drawing on the rich history and strategies of public health. In reframing privacy violations as a societal health issue rather than a matter of consumer choice, we see new avenues for effective regulation and protection. Our proposed approach not only aligns with successful public health interventions of the past but also provides a more holistic and proactive stance towards safeguarding privacy in the digital age.

I. INTRODUCTION

On June 17, 2024, US Surgeon General Vivek Murthy published an editorial in the New York Times, calling for the implementation of safety labels for children on social media platforms.[1] His call not only emphasized the association between adolescent mental health problems and social media use, but also singled out the need for better data privacy protections for social media users and more data availability for health researchers,[2] both information privacy issues of high importance. Murthy's two data demands might appear to be self-contradictory—the former would likely lead to less data collection and sharing, while the latter calls for more. However, the calls can be better understood as unified in the aim of promoting public health. Murthy's call reflects an emerging trend where information privacy issues are increasingly understood as a public health problem sometimes explicitly and sometimes implicitly.[3] Murthy's vision is to *calibrate* privacy: to enhance privacy where desirable for the public well-being but likewise limit privacy where desirable for the public well-being.

This calibration task is a delicate one. The field of public health has long grappled with the tension between individual liberties and societal well-being—a dynamic that remains relevant today, particularly in the context of information privacy.[4] In some cases of corporations selling products that impact public health,

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[1] Surgeon General Murthy's call included a specific request for privacy legislation. Vivek H. Murthy, *Surgeon General: Why I'm calling for a warning label on social media platforms*, N.Y. TIMES (June 17, 2024), https://www.nytimes.com/2024/06/17/opinion/social-media-health-warning.html [https://perma.cc/5LW2-K2RQ] ("Legislation from Congress should . . . prevent platforms from collecting sensitive data from children and should restrict the use of features like push notifications, autoplay and infinite scroll, which prey on developing brains and contribute to excessive use."). His editorial also included an acknowledgment of the need for data to effectuate appropriate public health measures. *Id*. ("[C]ompanies must be required to share all of their data on health effects with independent scientists and the public—currently they do not—and allow independent safety audits.").

[2] *Id.* ("The measures should prevent platforms from collecting sensitive data from children and should restrict the use of features like push notifications, autoplay and infinite scroll, which prey on developing brains and contribute to excessive use . . . . Additionally, companies must be required to share all of their data on health effects with independent scientists and the public—currently they do not—and allow independent safety audits.").

[3] *See* Jonathan Zittrain, *Three Eras of Digital Governance*, SSRN (Sept. 23, 2019), at 5-7, https://ssrn.com/abstract=3458435 [https://perma.cc/AGF6-N2MF] (framing online harms like disinformation as public health risks, requiring systemic interventions); Jonnie Penn, *The Next Tech Backlash Will Be About Hygiene*, TIME (Mar. 18, 2024), https://time.com/6957890/next-tech-backlash-hygiene/ [https://perma.cc/T263-Q6YH] (noting implicit parallels to public health through concerns over digital hygiene).

[4] The Supreme Court held that "the rights of the individual in respect of his liberty may at times, under the pressure of great dangers, be subjected to such restraint, . . . as the safety of the general public may demand." Jacobson v. Massachusetts, 197 U.S. 11, 29 (1905). But in a later case, it held that "[it] should respect the judgment of [public health experts] . . . . But even in a pandemic, the

profits have been at odds with—rather than aligned with—social welfare. This pattern of private sector products causing social crises has surfaced across many generations and industrial sectors, from the tobacco industry's obfuscation of smoking risks to the proliferation of processed foods and the shockingly extensive devastation of the opioid epidemic. In such cases, large, strategic corporations leverage information asymmetries and amass lobbying clout, which can lead to overly permissive regulations or even a lack of regulation. As harms gradually materialize and negative externalities compound, policymakers and the public are left playing catch-up, while industry narratives of "personal responsibility" and "informed choice" achieve cultural dominance, forestalling meaningful reform.[5] When reform finally does come, it is often centered around understanding and prioritizing the protection of public health in relation to the harmful product.

This Article argues that the current privacy crisis (one of both information and decision privacy) in the digital age represents the latest manifestation of a recurring pattern from public health.[6] Echoing tactics employed by the tobacco, food, and pharmaceutical industries, tech companies have leveraged their financial might to sway public opinion, obfuscate potential harms, and forestall meaningful privacy regulation.[7] The gradual normalization of ubiquitous data collection bears a concerning resemblance to the creep of cigarette marketing, the proliferation of unhealthy food products, and the deceptive marketing practices that ignited the opioid epidemic. Just as individuals grapple with the addictive appeal of nicotine and the enticing convenience of fast food, many of us find ourselves drawn to the attentional allure of social media or the ongoing integration of information-exploitative digital services into our daily lives.[8]

Constitution cannot be put away and forgotten . . . . [W]e have a duty to conduct a serious examination of the need for . . . drastic measure[s]." Roman Catholic Diocese of Brooklyn v. Cuomo, 592 U.S. 14, 19-20. For a broader philosophical discussion of public health and individual liberties, *see* Frank Griffin, *Liberty and Health*, 44 U. ARK. LITTLE ROCK L. REV. 1 (2021).

[5] *See* discussion *infra* Section IV.

[6] The degree to which there is an ongoing "privacy crisis" and the nature of that crisis remain highly contested. For those who perceive current public sector or private sector privacy practices to be inadequate—including the majority of Americans, Colleen McClain et al, How Americans View Data Privacy, PEW RESEARCH CENTER (October 18, 2023), https://www.pewresearch.org/internet/2023/10/18/how-americans-view-data-privacy/?utm [https://perma.cc/J9AH-JYUF] (finding that 81% and 71% of U.S. adults were concerned and confused about the use of their data by companies and the government, respectively)—the public health history offers useful insights. We are not alone in seeing connections between public health and concerns about new technologies. *See* Zittrain, *supra* note 3; Penn, *supra* note 3.

[7] This similarity of tactics need not necessarily be deliberate.

[8] *See* Cecilia Cheng et al., *Prevalence of Social Media Addiction across 32 Nations: Meta-analysis with Subgroup Analysis of Classification Schemes and Cultural Values*, 117 ADDICTIVE BEHAVS., June 2021, at 4 (performing a meta-analysis of studies of social media addiction finding prevalence of social media addiction ranging from 5 - 25% globally). The notion of addictive digital products has also readily taken hold in popular culture. *See, e.g.*, Aysha Imtiaz, *'Temu is as Addictive as Sugar': How the Ecommerce Retailer Drives a Shopping Frenzy*, BBC (Apr. 29, 2024), https://www.bbc.com/worklife/article/20240426-temu-gamification-marketing

The similarity between privacy challenges posed by problematic digital products,[9] and the struggles consumers encountered (and continue to encounter) with respect to other harmful products, such as tobacco, are not limited to dishonesty or obfuscation by firms. The social norms that governed reactions to these earlier public health challenges also seem to govern current views on individual responsibility in addressing the privacy challenges of our digital times. The narrative of informed choice, which framed tobacco use as a matter of personal willpower and likewise attributed childhood obesity and the opioid crisis to bad individual choices, has been used to advance the interests of problematic privacy-invasive industries by putting consumers in charge of protecting their own privacy, one atomistic decision at a time.[10]

In light of these parallels, this Article asks: What can the field of privacy law learn from public health's decades-long struggle to rein in harmful corporate practices and protect public welfare? How might a public health lens illuminate the systemic factors fueling the ongoing privacy crisis[11] and the shortcomings of the

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[https://perma.cc/7K7C-B2K9] (discussing the gamification strategies of platforms like Temu that drive addictive digital behaviors). We do not claim that all digital products and services are addictive or unjustifiably or unhealthily privacy invasive. But we view it as a reasonable claim that some common products of the current era certainly meet these descriptions.

[9] The arguments and conceptual similarities presented in this paper can likely be productive both for thinking about privacy law in the marketplace vis-à-vis consumers as well as to thinking about privacy protections vis-à-vis the government. Here we focus on consumer privacy issues, while sometimes flagging examples from public law to show that the ideas explored here are likely of great generality.

[10] This instantiates itself in legal expectations that consumers navigate the maze of data practices and privacy policies presented in everyday life, absolving corporations of accountability. *See* Yafit Lev-Aretz & Aileen Nielsen, *Privacy Notice and the Blame Game*, VA. J. L. & TECH. (forthcoming 2025) (on file with authors).

[11] We do not recapitulate the discussion of circumstances that contributes to the understanding by many that we are in the midst of a consumer privacy crisis. We find the following summary, generated by ChatGPT on October 17, 2024 to be descriptive of the state of the literature for those who contest current data collection practices: "The ongoing privacy crisis in digital privacy is characterized by the pervasive and often unconsented collection, storage, and exploitation of personal data by corporations, governments, and malicious actors. With the proliferation of smartphones, social media, and Internet of Things (IoT) devices, vast amounts of sensitive information—ranging from location and browsing habits to intimate personal details—are harvested, often without users' explicit knowledge or consent. This data is frequently used for targeted advertising, surveillance, and other purposes that can infringe on individual privacy rights. High-profile data breaches, inadequate regulatory frameworks, and the sophisticated techniques used to circumvent privacy protections exacerbate this crisis, leading to widespread concern about the erosion of personal privacy in the digital age." OpenAI, *ChatGPT Response to "generate a one paragraph description of the ongoing privacy crisis in digital privacy,"* CHATGPT (Oct. 17, 2024), https://chatgpt.com/share/671158fd-c3fc-8002-b3d5-b23c85f4e60c [https://perma.cc/9CRE-Q689]. For those who are skeptical that we are in the midst of an ongoing privacy crisis, we nonetheless believe our arguments have something to offer in the form of exploring an alternative regulatory paradigm that may be more responsive to the way people actually engage with digital products and services and the potential negative externalities associated with those products and services. In other words, one can believe that there isn't currently a privacy crisis but nonetheless believe that a different regulatory paradigm would be more appropriate for governing privacy.

existing regulatory paradigm? Most provocatively, could reconceptualizing privacy violations as an urgent public health threat provide a more solid foundation for effective legal interventions and finally galvanize the collective will to enact them?

To address such key questions, this Article delves into the historical precedents of three major public health crises, highlighting the common threads that bind them to the contemporary privacy landscape. By drawing parallels, we aim to make three contributions. First, we use the public health framework to reconcile the various definitions of privacy and shed light on the different strands of privacy scholarship. We argue that the public health lens provides a unifying perspective that transcends the traditional dichotomies between individual rights and collective interests, showing how privacy serves both personal and societal ends.[12]

Second, we challenge the prevalent misconception that public health's emphasis on information gathering is fundamentally at odds with privacy's focus on minimizing data exposure, a concern that would otherwise be at the least troubling (though not unprecedented).[13] Instead, we argue that robust privacy protections are in fact essential to maintaining public trust, facilitating accurate data collection and ultimately advancing public health objectives. Further, the public health community is acutely aware of the necessity of practicing privacy-protective public health. Far from being a zero-sum trade-off, privacy and public health are mutually reinforcing. We therefore believe that skepticism towards the public health community from the privacy law community is likely misdirected.

Third, we present a sliding scale of regulatory interventions from public health that privacy advocates can draw upon to inform legal interventions and policy strategies. We understand this spectrum to be dimensioned along the degree to which we would maintain a separation between privacy and public health. One end of this sliding scale would treat public health as analogous to privacy while maintaining privacy as a value separate from the goals of public health (this is the most conceptually familiar framing given current understandings of privacy and public health). We call this the "privacy-distinct pole" of the sliding scale. The other

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[12] *See* discussion *infra* Section V.A.

[13] For an example of a privacy remedy that itself featured data-intensive practices (specifically turning over more data to the accused tortfeasor in invasion of privacy litigation), see, e.g., Steve Henn, *Facebook Users Question $20 Million Settlement Over Ad*, NPR: ALL TECH CONSIDERED (May 13, 2013, 3:14 PM), https://www.npr.org/sections/alltechconsidered2013/05/14/182861926/facebook-users-question-20-million-settlement-over-ads [https://perma.cc/AD58-C8NK] (stating,

> "As part of the settlement proposal, Facebook will let adults opt out of this ad program, but only for two years. The settlement would also create an elaborate system to give parents the ability to prevent their kids' images from appearing in these ads. But before that could happen, both the parents and children would have to tell Facebook they are related, and then the parent would need to dig into his or her settings and ask Facebook to stop using the child in ads. Feldman says it's laughable.
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> 'Do you know what is hilarious about that?' asked Feldman. 'That becomes just another data collection mechanism for Facebook. I mean, just think how valuable it would be for them to find out who is related to whom on Facebook. For marketing purposes — I mean, my God — parents are already targeted.'")

end of the sliding scale would merge privacy matters fully into public health (the most conceptually distant from current understandings of privacy). We call this the "privacy-merged pole" of the sliding scale. We start with the most straightforward and familiar applications—those grounded firmly near the privacy-distinct pole, such as widely heralded calls (including our own prior work) to move away from notice-and-consent. We highlight specific tools and regulatory approaches that have been deployed in public health contexts, such as implementing comprehensive privacy safeguards akin to food safety standards, leveraging public awareness campaigns to reshape cultural norms around data sharing, imposing data taxes, and instituting algorithmic auditing processes to detect and mitigate disparate impacts.

Moving along the spectrum, we explore a middle ground between the privacy-distinct and privacy-merged poles, which engages the deeper conceptual shifts that a public health orientation invites. Central among these is recognizing privacy violations as a key tangible determinant of health—one that directly impacts individuals' mental health and well-being. We present a case for conceptualizing privacy as an essential *input* to public health and an essential *output* measure of public health success, given the well-documented mental health impacts of privacy violations and surveillance.

Finally, we arrive at an extreme thought experiment at the privacy-merged pole: reconceptualizing the privacy crisis as a public health issue in its own right. By framing privacy violations not as an inconvenient consumer markets trade-off of the digital age, but as an unchecked epidemic that threatens individual and societal well-being, we peek through the door to a paradigm that fundamentally moves away from an individual to a social perspective, and from remedying harms after they have materialized to implementing upfront protection and prevention. Through this lens, we can harness the rich theoretical and practical dimensions of public health to develop novel interventions, foster cross-disciplinary collaboration, and mobilize resources to promote a more equitable and consumer-friendly digital future. This latter is a key observation: the public health paradigm can nonetheless help us improve the same consumer protection outcomes that have traditionally been of interest to the privacy law community.

Structurally, the Article proceeds as follows: Section II unpacks the conceptual messiness surrounding both privacy and public health. It highlights the long-standing challenges in arriving at consistent definitions in the relevant scholarly and practitioner communities and the shared tensions around individual choice versus collective well-being. We delve into the conceptual fuzziness both to highlight yet another parallel between privacy and public health but also to expose the scoping difficulties of this discussion. In Section III, we present detailed public health case studies tracing how powerful industries have repeatedly leveraged information asymmetries and regulatory vacuums to keep dangerous products in the marketplace and subvert the public welfare. Section IV highlights the parallels between recent public health threats and the growing digital information privacy crisis, including tech giants' opaque data practices that hinder privacy regulations and the shifting of harm responsibility onto individuals' "choices" to use essential digital platforms.

Finally, Section V explores what the field of privacy can learn from the hard-won (or perhaps more often, hard-lost) battles of public health in curbing corporate malfeasance and safeguarding community welfare. We begin by identifying an undercurrent of public health narratives in privacy scholarship, showing how privacy law academia has implicitly adopted a public health logic. We extend this insight to argue that the commonly cited privacy-public health tradeoff is more illusion than reality. We conclude by offering a likely novel reframing of current information and decision privacy practices as a full-fledged public health crisis in its own right, one that could justify deploying the powerful arsenal of population-level interventions.

II. PRIVACY AND PUBLIC HEALTH: A SHARED FATE OF CONCEPTUAL CONFUSION

An abstract comparison of privacy and public health reveals several core similarities. The key similarity we focus on in this Section is the lack of a clear or unified definition for either. Scholars and practitioners have struggled to devise working definitions for both privacy and public health that successfully cover their legal, social, economic, and ethical dimensions, while remaining sufficiently practical for real-world application.

The lack of definitional consensus in these two fields stems from similar underlying issues, and specifically three sets of competing views. First is the *breadth of the definition*. Both concepts have varied definitions, ranging from expansive and all-encompassing on one end to narrower and more specific on the other. In privacy, some scholars propose broad interpretations of privacy, while others argue for distinguishing privacy from concepts they claim are related but distinct, such as autonomy, dignity, or liberty.[14] Similarly, in public health, traditional views focus narrowly on topics such as hygiene, vaccination, and biomedical issues, whereas contemporary approaches often embrace wider notions of public health, including social and behavioral challenges linked to issues such as mental health, family dynamics, and sexual autonomy.[15]

Second is *the conflict between individual autonomy and collective decision-making*. To what extent, if any, should the government intervene when individuals make privacy or health choices that may be detrimental to themselves or others? What grounds justify the government in overriding individual choice? Balancing the respect for personal liberty with the need for societal protection is a central challenge in both privacy and public health.

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[14] *Compare* Dorota Mokrosinska, *Privacy and Autonomy: On Some Misconceptions Concerning the Political Dimensions of Privacy*, 37 LAW & PHIL. 117, 137-43 (2018) (referencing "the concept of autonomy traditionally associated with privacy") & Daniel J. Solove, *A Taxonomy of Privacy*, 154 U. PA. L. REV. 477 (2006) (providing a taxonomy of harms one branch of which, "Invasion", concerns itself with harms to autonomy) *with* Helen Nissenbaum, *A Contextual Approach to Privacy Online*, 140 DAEDALUS 32, 33 (2011) (implicitly rejecting the importance of autonomy to understanding or defining privacy).

[15] *See* discussion regarding the varying definitions of public health, *infra* Section II.B.

Third is *the conflict between individual and social wellbeing.* Privacy has traditionally been viewed (and legally regulated) as an individual value, a characterization that has repeatedly pushed privacy low in policymaking priorities in the face of other interests like public safety and homeland security.[16] But in recent years, there has been a growing recognition of privacy as a social value and, thus, of privacy harms as social harms. This gradual shift is reflected in recent legal and policy proposals, including broad measures to ban the collection of certain sensitive information or information from specific vulnerable groups, independent of individual consent.[17] Public health decisions likewise involve competing approaches as to the scope of the field—some believe it should focus on measures of individual wellness and the promotion of individualized health outcomes, such as reducing the rate of sexually transmitted illness globally and without attention to community dynamics or structure.[18] Others highlight the need to address public health from a community perspective and even to emphasize the collective wellness of certain communities, as reflected in decisions to prioritize certain historically disadvantaged communities for vaccine access in times of shortage.[19]

A. Privacy

The lack of a clear, unified definition of privacy has long been a challenge for the law and legal scholarship. Countless scholars across various disciplines have attempted to define privacy, but privacy is still viewed as a "contested concept that is neither unified nor coherent," "elusive,"[20] "poorly articulated," and "vaguely theorized."[21] This is at least in part because privacy covers a variety of distinct, and at times competing, interests. Some view it as a dignitary right,[22] others as a

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[16] *See* PRISCILLA M. REGAN, LEGISLATING PRIVACY: TECHNOLOGY, SOCIAL VALUES, AND PUBLIC POLICY 14-23 (1995).

[17] For example, in 2020, the state of Maryland passed a data privacy bill that prohibits the sale of sensitive information even where consent is obtained. This same statute passed by Maryland also prohibits the collection of health data within a certain distance of a healthcare facility. *See* Maryland Online Data Privacy Act, H.B. 567, 2024 Gen. Assembly., Reg. Sess. § 14-4607(A)(2) and § 14-4604 (Md. 2024) (enrolled bill).

[18] Lindsay F. Wiley, *The Struggle for the Soul of Public Health*, 41 J. HEALTH POL. POL'Y & L. 1083, 1083-96 (2016).

[19] *Id.*

[20] Jonathan Kahn, *Privacy as a Legal Principle of Identity Maintenance*, 33 SETON HALL L. REV. 371, 371 (2003).

[21] Neil M. Richards, *Reconciling Data Privacy and the First Amendment*, 52 UCLA L. Rev. 1149, 1155 (2005).

[22] *See* Julie E. Cohen, *What Privacy Is For*, 126 HARV. L. REV. 1904, 1906 (2013) ("In a world characterized by pervasive social shaping of subjectivity, privacy fosters (partial) self-determination. It enables individuals both to maintain relational ties and to develop critical perspectives on the world around them.").

property right,[23] while others emphasize the relational[24] or fiduciary[25] aspects of privacy. Some scholars advance the theory of privacy as a public good, arguing that the value of privacy is communal and accrues to society,[26] a far cry from the law's current conception of privacy as an individualized, market-governed consumer protection issue.

It is not only the scope of privacy or the nature of privacy that lacks a unifying definition; the very boundary (and nature of that boundary) between what is private and what is not is also contested. Scholars have moved away from narrow, binary conceptions of privacy[27] (i.e. information is either private or public) towards more nuanced, context-dependent understandings. Theories like Ari Waldman's "privacy as trust"[28] and Helen Nissenbaum's "privacy as contextual integrity"[29] suggest that even disclosed information can retain reasonable expectations of privacy, depending on social norms and relationships.

Daniel Solove proposed a widely-cited taxonomy of privacy harms that does not commit to a single definition of privacy but does accommodate the varied expectations of privacy that individuals hold.[30] Solove proposed a number of umbrella categories to describe privacy harms: information collection, information

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[23] *See* Jathan Sadowski, *When Data Is Capital: Datafication, Accumulation, and Extraction*, BIG DATA & SOC'Y, Jan-June 2019, at 1, 3-4 (2019) (framing data economic capital, convertible under certain conditions into property and monetary value); Ignacio N. Cofone, *The Dynamic Effect of Information Privacy Law*, 18 MINN. J.L. SCI. & TECH. 517, 543 (2017) (framing personal information as a property entitlement to protect privacy through consent-based control).

[24] Salomé Viljoen, *A Relational Theory of Data Governance*, 131 YALE L.J. 573, 611 (2021) (discussing data's relational and aggregation-driven value, which fuels extensive collection to enhance predictive accuracy).

[25] Jack M. Balkin & Jonathan Zittrain, *A Grand Bargain to Make Tech Companies Trustworthy*, THE ATLANTIC (Oct. 3, 2016), https://www.theatlantic.com/technology/archive/2016/10/information-fiduciary/502346/ [https://perma.cc/CZ96-9YXZ] (advocating fiduciary duties for digital firms to prioritize user privacy).

[26] Paul M. Schwartz, *Property, Privacy, and Personal Data*, 117 HARV. L. REV. 2056, 2084-90 (2004). *See, e.g.*, Joshua A.T. Fairfield & Christoph Engel, *Privacy as a Public Good*, 65 DUKE L.J. 385 (2015); REGAN, *supra* note 16.

[27] For an example embodying the earlier, binary conception of privacy, see Samuel D. Warren & Louis D. Brandeis, *The Right to Privacy*, 4 HARV. L. REV. 193 (1890). This binary conception of privacy is (unsurprisingly) often advanced in defendants' briefs as well. *See, e.g.*, Memorandum of Law in Support of Motion of Defendant Facebook, Inc. to Dismiss Plaintiffs' Consolidated Complaint, In re Facebook, Inc., Consumer Priv. User Profile Litig., 402 F. Supp. 3d 767 (N.D. Cal. 2019) (No. 18-md-02843-VC).

[28] Ari Ezra Waldman, *Privacy as Trust: Sharing Personal Information in a Networked World*, 69 U. MIAMI L. REV. 559 (2014). *See also* Neil M. Richards & Woodrow Hartzog, *Taking Trust Seriously in Privacy Law*, 19 STAN. TECH. L. REV. 431 (2016) (viewing privacy as a means to reinforce trust within established relationships).

[29] Helen Nissenbaum, *A Contextual Approach to Privacy Online*, 140 DAEDALUS 32, 33 (2011).

[30] Daniel J. Solove, *A Taxonomy of Privacy*, 154 U. PENN. L. REV. 477, 481-83 (2006); *see also* Daniel J. Solove, *"I've Got Nothing to Hide" and Other Misunderstandings of Privacy*, 44 SAN DIEGO L. REV. 745, 754-60 (2007).

processing, information dissemination, and invasion.[31] Each of these categories, in turn, spanned a wide range of circumstances by which expectations of or desire for privacy are compromised, including both nonconsensual data collection and compilation, but also harms less classically associated with privacy, such as intrusions upon a person's attention or interference with decision-making.[32] Solove took a big tent approach to privacy harms (and so, implicitly, to privacy), attempting to include nearly all forms of privacy incursions that had been previously discussed in the literature or recognized culturally.[33]

But some within the privacy law field believed that Solove's work has taken too broad an approach to move the field forward. In recent work, Maria Angel and Ryan Calo argued that while the long-dominant social taxonomical approach to privacy advocated by Solove has shaped contemporary privacy scholarship, this approach fails to serve the field well.[34] In their view, "social recognition alone is not—and never has been—a sufficient criterion for what counts as a privacy problem."[35] They suggested that Solove's expansive and inclusive taxonomic approach "omits, and arguably impedes, the development of a sophisticated framework for interrogating the tension between the various values under the privacy umbrella."[36]

In addition to the amorphous and evolving nature of the philosophical task of defining privacy, the line drawing task around what is a legally actionable privacy harm has also been a major challenge. Federal courts have long struggled to identify privacy harms arising from statutory violations, requiring plaintiffs to demonstrate additional injury beyond the statutory violation to establish standing.[37] The Supreme Court's ruling in *Spokeo v. Robins*[38] further complicated an already murky landscape of defining and addressing privacy harms by mandating that this inquiry be addressed at the earliest procedural stage of every legal process alleging a privacy harm, even a well-defined statutory claim. In *Spokeo*, the Court held that for statutory privacy violations, plaintiffs must demonstrate a concrete injury to establish standing, going beyond merely showing a violation of the statute itself.[39] The concrete injury requirement has led to a circuit split, with some courts insisting on additional, tangible harm beyond a statutory violation, and others accepting the

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[31] Solove, *A Taxonomy of Privacy*, *supra* note 30, at 488.

[32] *See id.* at 490-491.

[33] *See id.* at 479.

[34] María P. Angel & Ryan Calo, *Distinguishing Privacy Law: A Critique of Privacy as Social Taxonomy*, 124 COLUM. L. REV. 507, 511 (2023).

[35] *Id.*

[36] *Id.*

[37] *See* Danielle Citron & Daniel Solove, *Privacy Harms*, 102 B.U. L. REV. 793, 798 (2022).

[38] Spokeo, Inc. v. Robins, 578 U.S. 330 (2016).

[39] *Id.* at 341.

risk of future harm as sufficient to establish standing.[40] The difficulties created by *Spokeo* were only compounded by the Supreme Court's subsequent ruling in *TransUnion v. Ramirez* with the additional conceptual difficulty of mapping theorized privacy harms onto history and tradition reflected in the common law[41] —a particular difficulty when the privacy torts themselves are a 20th century invention.[42]

The disagreements over what constitutes a legally cognizable privacy harm, coupled with the lack of a unifying definition of privacy, have probably hindered meaningful progress in federal privacy lawmaking and in litigation by private parties alike.[43] This challenge persists. Even as the landscape of privacy law continues to evolve with a growing number of state privacy statutes, scholars remain divided over defining privacy and the value of sketching its boundaries.

The central idea explored in this Article—that privacy scholarship and advocacy may adopt valuable lessons from the public health community or might even productively merge into public health—does not rely on adopting a specific definition of privacy. Moreover, we believe that the barrier created by the diverse perspectives on the fundamental nature of privacy can be significantly reduced by embracing a public health paradigm, which we will explore in greater detail *infra*.[44] In essence, applying a public health lens to privacy could relieve us of the need to craft narrowly tailored definitions and rights, as well as from the evidentiary[45] and definitional burdens imposed by civil procedure and tort law. A public health

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[40] Ignacio Cofone, *Privacy Standing*, 2022 U. ILL. L. REV. 1367, 1375-76 (2022). Scholars have proposed various theoretical approaches to conceptualizing privacy harms, but none of them has been adopted by federal courts. *See, e.g.*, Ryan Calo, *The Boundaries of Privacy Harm*, 86 IND. L.J. 1131, 1142-43 (2011) (providing an overview of the nature and workings of privacy harms and arguing that they can be classified into two distinct categories); Citron & Solove, *supra* note 37, at 793-94 (proposing a typology for privacy to address the misalignment between enforcement mechanisms and the actual impacts of privacy violations).

[41] TransUnion LLC v. Ramirez, 594 U.S. 413, 424 (2021)

[42] *See* Warren & Brandeis, *supra* note 27.

[43] *See, e.g.*, Julie Jargon, *Patchwork of State Privacy Laws Remains After Latest Failed Bid for Federal Law*, WALL ST. J. (Aug. 29, 2024), https://www.wsj.com/articles/patchwork-of-state-privacy-laws-remains-after-latest-failed-bid-for-federal-law-2a1a020d (noting federal privacy law stalled in part over disagreements on private rights of action); Citron & Solove, *supra* note 37, at 800 (observing that courts have imposed harm requirements that complicate privacy law enforcement).

[44] *See infra* Section V.E.

[45] As we will discuss infra, the public health community is well habituated to addressing and preventing harms even without a full causal chain of evidence. This necessity to act quickly with regards to health was itself highlighted by Surgeon General Mercy in his recent call with respect to the harms likely caused by social media. Murthy, *supra* note 1 ("One of the most important lessons I learned in medical school was that in an emergency, you don't have the luxury to wait for perfect information. You assess the available facts, you use your best judgment, and you act quickly."). We also note that it is not only the case of privacy harms that challenges the current formalities of the torts system. *Cf* Steven Shavell, *An Alternate to the Basic Causal Requirement for Liability Under the Negligence Rule*, 17 J. TORT L. 61, 61 (2024).

paradigm shift would allow us to focus on *substantive issues rather than formalities* when shaping privacy policy.

B. Public Health

Public health is a multidisciplinary field dedicated to promoting and protecting the overall health of communities and populations.[46] Its primary focus lies in developing comprehensive knowledge and implementing proactive strategies to prevent diseases, injuries, and other detrimental conditions that could undermine the well-being of a population as a whole.[47] While medicine focuses on diagnosing and treating conditions that affect the health of individual patients, public health adopts a more comprehensive, population-level approach.[48] In other words, despite the three similar tensions present in both privacy and public health that we outlined earlier, we observe that public health—with its arguably longer and more diverse history compared to privacy advocacy—has seemingly achieved a more holistic and adaptable equilibrium than privacy advocacy. Definitions of public health continue to be contested but exist within a range that presupposes some importance of the group over the individual[49]—a significant deviation from mainstream approaches to privacy.[50] As a result, though public health practitioners no doubt lament the failings they identify in their own field, the practice of health has long been recognized as an appropriate domain for protection by governments and by social organization rather than by individual choice alone. This stands as a deviation from the dominant, atomistic notion of appropriate privacy protections as being largely limited to individualized notice-and-consent regimes.[51]

Just like the concept of privacy, the concept of public health has proven notoriously difficult to define, with varying conceptions and scope. A broad view of public health encompasses any societal factors that affect health, including issues like war, violence, poverty, economic development, and civil rights. Proponents of this view argue that public health should address the "root causes" of poor health, even if those causes extend far beyond traditional public health domains. The Institute of Medicine ("IOM") (formerly the National Academy of Medicine)

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[46] Jennifer S. Bard, *How Public Health Informed Lawmaking Would Address the Rising Synthetic Opioid Death Toll*, 87 BROOK. L. REV. 657, 675 (2022).

[47] *Id.*

[48] *Id.*

[49] *See supra* Section II.A.

[50] Public health enforcement has faced its own challenges in the legal system. However, public health prerogatives are not so much doubted for their own adequacy but are rather sometimes unsuccessful when balanced against competing values, such as First Amendment freedoms, or when the pursuit of public health is done in a manner that is insufficiently tailored in means used to obtain a public health end. *See, e.g.*, Tandon v. Newsom, 593 U.S. 61, 64 (2021) (faulting COVID measures only for treating religious and non-religious activities differently, without calling into question the possibility that such strict measures could otherwise prove lawful).

[51] *See* Daniel J. Solove, *Privacy Self-Management and the Consent Dilemma*, 126 HARV. L. REV. 1880, 1880-83 (2013) (noting that privacy self-management remains the foundation of major privacy frameworks).

subscribes to this logic with its position that "public health is what we, as a society, do collectively to assure the conditions in which people can be healthy."[52] The World Health Organization ("WHO") similarly states in its constitution that "health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."[53] These definitions highlight that public health focuses on collective, often government-led, action to promote population health by addressing the underlying "conditions" that influence health, rather than just individual medical care.[54] This definition of public health can explain why medical professionals have taken stances on issues that extend beyond traditional biological health concerns, such as gun control[55] and screen time.[56] In a more workaday example, this broad understanding can also account for the common activities we observe as ordinary citizens interacting with public health messaging, such as encouragement to see city infrastructure as an opportunity to exercise.[57]

Critics counter that an expansive definition of public health dilutes the focus and effectiveness of public health institutions.[58] A narrower conception views public health as the government's responsibility to take "appropriate measures pursuant to specific legal authority, after balancing private rights and public interests, to protect the health of the public."[59] This definition focuses public health on the government's coercive powers to address serious threats to the overall population's health, such as through disease surveillance, quarantine, or environmental regulation, and further insists on legal enumeration and

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[52] COMMITTEE FOR THE STUDY OF THE FUTURE OF PUBLIC HEALTH, INSTITUTE OF MEDICINE, THE FUTURE OF PUBLIC HEALTH 19 (1988).

[53] Constitution of the World Health Organization, July 22, 1946, 14 U.N.T.S. 185. The preamble goes on to state, "The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition." *Id.*

[54] Micah L. Berman, *Defining the Field of Public Health Law*, 15 DEPAUL J. HEALTH CARE L. 45, 61-62 (2013).

[55] Nicholas Darshan Tolat et al., *Physician Involvement in Promoting Gun Safety,* 18 ANN. FAM. MED. 262, 262-63 (2020).

[56] *Media and Children*, AMERICAN ACADEMY OF PEDIATRICS (June 4, 2021), https://www.aap.org/en/patient-care/media-and-children/ [https://perma.cc/Q5CW-MP8W].

[57] *See, e.g.*, *Make NYC Your Gym: Active Lady Liberty_Print Spanish* (illustration), CTRS. FOR DISEASE CONTROL & PREVENTION (Feb. 23, 2016), https://nccd.cdc.gov/schmc/apps/searchdetails.aspx?CatalogID=2111 [https://perma.cc/UPR6-V52H] (illustrating a sample advertisement from the NYC subway system listing (in Spanish) examples of how commuters could be more physically active by making different routine choices during their use of public transportation, such as getting off a stop earlier or using the stairs).

[58] Mark A. Rothstein, *Rethinking the Meaning of Public Health*, 30 J.L. MED. & ETHICS 144, 145 (2002).

[59] *Id.* at 146.

empowerment.[60] This narrow view distinguishes public health from individual or private efforts to improve health.

A third approach is a "population health" conception, which defines public health as focusing on the health of entire communities or populations, rather than only individuals.[61] This can include both government and private sector efforts to improve overall population-level health indicators, such as through health promotion, disease prevention, and access to care.[62] This third approach is not on the same spectrum as the first two, but it is rather another axis of variation that may apply to a broad or a narrow understanding of public health.[63]

In summary, public health and privacy both lack a universally accepted definition. The scope and focus of each field are subject to ongoing debates concerning the appropriate role of government, the balance between individual rights and collective needs, and the relative risk of proximate and direct harms versus upstream and indirect harms. Both fields recognize the importance of the collective aspects of challenges to privacy and public health, although this understanding is more nascent and less integrated into practice in privacy. In the context of privacy, perspectives that examine the broader societal implications of surveillance and widespread privacy violations have slowly gained traction and entered mainstream discourse.

We believe that it is no coincidence that privacy and public health face a definitional challenge. This highlights a fundamental commonality: just as individual biological health has statistical correlations with community health, so too does individual privacy have strong correlations with community privacy norms and ambient privacy provisions.[64] There is an inherent difficulty in defining and locating harms or defining a target for mitigation or regulation where there is a web of causal but stochastic interconnections between the wellbeing of the individual and the wellbeing of the group as a whole. Such circumstances describe both biological or mental wellness and privacy alike.

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[60] *See id.* at 146-47; *see also* Nat'l Fed'n of Indep. Bus. v. OSHA, 595 U.S. 109, 119-20 (2022) (distinguishing OSHA's permissible role in setting workplace safety from "broad public health" mandates, such as the challenged vaccine mandate at issue in the case).

[61] Joshua Joel, *A Compelling Interest? Using Old Conceptions of Public Health Law to Challenge the Affordable Care Act's Contraceptive Mandate*, 31 GA. ST. U. L. REV. 613, 624-26 (2015).

[62] *Id.* at 625.

[63] The first two approaches discussed previously differ in their scoping of the problem to correct, and particularly whether it should be limited to biological factors or go beyond. This current approach varies along the axis as to the unit of measurement (looking to outcomes in specific communities rather than looking at outcomes globally, with the latter implicitly looking at rates as among all individuals and thus an individualistic metric).

[64] In the case of privacy, see, e.g., Solon Barocas & Karen Levy, *Privacy Dependencies*, 95 WASH. L. REV. 555, 559-61 (2020) (offering a comprehensive survey of "the many ways that our privacy depends on the decisions and disclosures of other people").

Having established that both privacy and public health face similar definitional challenges, we now turn to three public health case studies that reveal a striking resemblance to current privacy issues.

III. PUBLIC HEALTH CASE STUDIES

In this Section, we delve into three case studies that illustrate a recurring pattern of health crises bearing a striking resemblance to the current privacy crisis. These case studies include health crises that were initiated, perpetuated, and sustained by three powerful industries: the tobacco industry, the processed food industry, and the pharmaceutical. By examining the strategies employed by these industries and the resulting public health consequences, we aim to shed light on the parallels between these historical examples and the ongoing challenges faced by privacy advocates in the digital age.

A. The Tobacco Industry

For decades, tobacco products have created and sustained a devastating public health crisis in the United States and globally. The WHO considers the global tobacco epidemic to be among the most severe public health challenges ever encountered, with over 8 million deaths annually worldwide.[65] Of these, more than 7 million annual deaths are directly linked to tobacco consumption, while approximately 1.3 million result from non-smokers being exposed to secondhand smoke.[66] The large number of affected individuals and the combination of direct and indirect harms parallel privacy.[67] As with the tobacco industry, the privacy crisis is affecting huge swaths of the population. This is particularly true when we adopt a broad perspective on privacy harms, which encompasses not only specific incidents like identity theft, but also decision privacy harms such as social media addiction or harmful behavioral changes caused or enabled by data collection[68]—issues that have been slow to gain legal recognition.[69]

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[65] *Tobacco*, WORLD HEALTH ORGANIZATION [WHO] (July 31, 2023), https://www.who.int/news-room/fact-sheets/detail/tobacco [https://perma.cc/8R6J-GPXK].

[66] *Id.*

[67] The large number of individuals affected by the privacy crisis is likely larger than the large number of individuals affected by Big Tobacco in the contemporary United States. *See, e.g.*, Jonathan Stempel, *Apple to pay $95 million to settle Siri privacy lawsuit*, Reuters (Jan. 2, 2025), https://www.reuters.com/legal/apple-pay-95-million-settle-siri-privacy-lawsuit-2025-01-02/ (noting that tens of millions were likely affected by alleged privacy violations stemming from Siri's inadvertent recordings of users without their consent). On the other hand, from a global perspective an individual in some countries may be equally likely to be exposed to tobacco or to privacy-invasive practices.

[68] *See generally* Catherine Tucker & Alex Marthews, *The Impact of Online Surveillance on Behavior* (June 18, 2017) (manuscript), https://dspace.mit.edu/bitstream/handle/1721.1/130532/SSRN-id3167473.pdf?sequence=2&isAllowed=y [https://perma.cc/BX6Y-38NH].

[69] *See, e.g.*, In re Social Media Adolescent Addiction/Personal Injury Products Liab. Litig., 702 F. Supp. 3d 809, 819-821 (N.D. Cal. 2023) (order granting in part and denying in part defendants'

Tobacco use has been linked to a wide range of serious health problems, including cancers of the lung, mouth, throat, esophagus, stomach, bladder, and pancreas, heart disease, stroke, chronic respiratory illnesses, and cancers of the lung, mouth, throat, esophagus, stomach, bladder, and pancreas.[70] Consumption of tobacco soared from relative obscurity in 1900 to a central part of American culture by the 1930s, driven by mass production techniques and effective marketing strategies.[71] This too suggests parallels with the most recent drivers of an ongoing consumer privacy crisis, including the rapid rise of an industry from social marginality or novelty in the 1990s to social and economic dominance in the 2020s. The dominance of privacy-invasive industries has progressed apace with rising cognizance of the associated harms, both direct and indirect, in contrast to the far more lagged understanding of the harms of tobacco.

A key factor underlying the tobacco crisis is the highly addictive nature of nicotine, the primary psychoactive ingredient in tobacco products. Scientific evidence has shown that nicotine is as addictive as heroin or cocaine, rapidly causing physiological dependence.[72] This addictive quality has made it extremely difficult for many smokers to quit, even in the face of well-known health risks.[73] Likewise, there is some empirical evidence that certain forms of privacy-invasive products draw some of their market and cultural power from intentionally addictive design.[74]

Despite the addiction-by-design baked into tobacco products, which the industry knew about but denied for decades before independent studies confirmed it in the 1980s,[75] the tobacco industry has historically—and, for a long time,

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motions to dismiss) (an example of plaintiffs asserting legal theories regarding the addictive nature of social media products, a theory that has yet to lead to any substantial plaintiffs' victories).

[70] *Cigarette Smoking*, CTRS. FOR DISEASE CONTROL & PREVENTION (Sept. 17, 2024), https://www.cdc.gov/tobacco/about/index.html [https://perma.cc/JEK2-YWE7]; *see also Tobacco*, *supra* note 65.

[71] ALLAN M. BRANDT, THE CIGARETTE CENTURY: THE RISE, FALL AND DEADLY PERSISTENCE OF THE PRODUCT THAT DEFINED AMERICA 2-3 (2007).

[72] *Why it's so hard to quit smoking*, AM. HEART ASS'N NEWS (Oct. 17, 2018), https://www.heart.org/en/news/2018/10/17/why-its-so-hard-to-quit-smoking [https://perma.cc/B7DD-KRFA] (quoting Dr. Neil Benowitz, a nicotine researcher, saying that "[f]rom a scientific standpoint, nicotine is just as hard, or harder, to quit than heroin . . . but people don't recognize that."); *Collection: Nicotine*, STANFORD RESEARCH INTO THE IMPACT OF TOBACCO ADVERTISING, https://tobacco.stanford.edu/antismoking/main-poisons/nicotine/ [https://perma.cc/4NF9-CPP8] (last visited Sept. 29, 2024) ("The pharmacological and behavioral characteristics of nicotine addiction are similar to drugs like heroin and cocaine.").

[73] *Is nicotine addictive? Tobacco, Nicotine, and E-Cigarettes Research Report*, NAT'L INST. ON DRUG ABUSE (Jan. 2020), https://nida.nih.gov/publications/research-reports/tobacco-nicotine-e-cigarettes/nicotine-addictive [https://perma.cc/A9LU-4FY2].

[74] *See* Maèva Flayelle et al., *A Taxonomy of Technology Design Features that Promote Potentially Addictive Online Behaviours*, 2 NAT. REV. PSYCHOL. 136, 141-42 (2023).

[75] *See* CLIVE BATES & ANDY ROWELL, TOBACCO EXPLAINED . . . THE TRUTH ABOUT THE TOBACCO INDUSTRY . . . IN ITS OWN WORDS 3-11 (2004).

successfully—argued that tobacco use was a matter of personal choice.[76] In the 1940s and 1950s, the tobacco industry disputed the findings of anti-smoking research and funded its own studies that cast doubt on claims linking smoking to severe health issues.[77] Even then, tobacco companies were aware of the addictive and harmful effects of their products but deliberately concealed this information from the public.[78] Internal documents and whistleblower testimony have revealed that tobacco executives knew about the addictive properties of nicotine and the link between smoking and cancer but actively worked to downplay and deny the evidence of these harms.[79] Viewing in hindsight the actions of Meta/Facebook following revelations from whistleblower Frances Haugen's trove of documents, we note the same suppression and mischaracterization of a company's knowledge as to the social and psychological harms of its product and the same misleading statements made directly to Congress, even if the time scale is more compressed than in the case of tobacco.[80]

Over time, as the public became increasingly informed about the dangers of tobacco use through public health campaigns, scientific studies, and media

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[76] Edith D. Balbach et al., *How the Health Belief Model Helps the Tobacco Industry: Individuals, Choice, and "Information*," 15 TOBACCO CONTROL iv37, iv38 (2006).

[77] *See* Allan M. Brandt, *Inventing Conflicts of Interest: A History of Tobacco Industry Tactics*, 102 AM. J. PUB. HEALTH 63, 63-64 (2012).

[78] United States v. Philip Morris USA, Inc., 449 F. Supp. 2d 1, 289-90 (D.D.C. 2006), on reconsideration in part, 783 F. Supp. 2d 23 (D.D.C. 2011) (finding that "Defendants' internal documents reflect a sophisticated understanding of nicotine and its role in creating smoking addiction . . . . In addition, it is clear that Defendants intentionally withheld from public dissemination, from the public health community, and from government authorities, accurate and important information regarding the addictiveness of nicotine in cigarettes.").

[79] *Id.* at 289-290. In the early 1990s, Merrell Williams, a paralegal, obtained documents proving the tobacco industry's awareness of smoking's health risks and addiction. Concurrently, Jeffrey Wigand, former research chief at Brown and Williamson, was dismissed for challenging the company's denial of these risks. Their disclosures were highlighted in major newspapers, Congressional hearings, and among anti-tobacco groups. *See* Robert L. Rabin, *The Third Wave of Tobacco Tort Litigation*, *in* REGULATING TOBACCO 176, 184 (Robert L. Rabin & Stephen D. Sugarman eds., 2001).

[80] *Blumenthal to Meta CEO: "Mr. Zuckerberg, Do You Believe that You Have a Constitutional Right to Lie to Congress?"*, U.S. SENATE (Jan. 31, 2024), https://www.blumenthal.senate.gov/newsroom/press/release/blumenthal-to-meta-ceo-mr-zuckerberg-do-you-believe-that-you-have-a-constitutional-right-to-lie-to-congress?utm [https://perma.cc/M4UQ-NBUR] (discussing Meta's misrepresentation to Congress regarding the harm to children). The privacy literature is replete with distinct examples of how firms have thwarted the creation or application of privacy laws. *See, e.g.*, Katherine J. Strandburg, Salome Viljoen & Helen F. Nissenbaum, *The Great Regulatory Dodge*, 37 HARV. J. L. & TECH. 1231, 1238-1239 (2023) (describing how firms have structured their activities and products to avoid the application of sectoral privacy laws); Rory Van Loo, *Privacy Pretexts*, 108 CORNELL L. REV. 1, 39-41 (2022) (describing a form of malicious compliance in which firms thwart the exercise of privacy rights with unreasonably demanding and likely pretextual demands on those seeking to exercise such rights).

reporting, social attitudes toward smoking shifted dramatically.[81] Smoking, once seen as a socially acceptable or even a socially required habit,[82] has come to be considered by many as irresponsible and harmful, particularly due to the impact of secondhand smoke on non-smokers.[83] Privacy decisions have externalities too, another commonality with the Big Tobacco crisis, but use of privacy-invasive products is also viewed as a social necessity, as was previously the case for tobacco.[84] American dissatisfaction[85] with the relatively laissez-faire U.S. privacy laws may therefore reflect a nascent similarity of perception not just in the recognition that privacy risks are serious and widespread but also that privacy risks have externalities that can be mitigated through regulatory intervention more effectively than through individual decisions.

In response to the growing public health crisis, policymakers and regulators have undertaken various legal and regulatory efforts to address tobacco use. These include what scholars have categorized as three waves of litigation, each marked by distinct shifts in legal strategies, public awareness, and litigation outcomes.[86] The first wave of tobacco litigation (1954-1973) was triggered by the emergence of scientific studies linking smoking to lung cancer.[87] Early lawsuits invoked theories of negligence and breach of warranty but were largely unsuccessful.[88] Plaintiffs faced challenges in proving causation, and the tobacco industry employed aggressive defense tactics to avoid liability, leveraging its significant financial and legal resources to discredit the emerging health evidence.[89] Arguably, this same legal hurdle of causation is part of what has prevented privacy litigation from substantially modifying the laissez-faire privacy regime that currently governs most

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[81] *See* K Michael Cummings & Robert N. Proctor, *The Changing Public Image of Smoking in the United States: 1964-2014,* 23 CANCER EPIDEMIOLOGY BIOMARKERS & PREVENTION 32, 33-34 (2014).

[82] For some who found it necessary to smoke for social inclusion, tobacco products may very well have been a good that some people buy but would rather not exist. *See* Cass R. Sunstein, *Goods That People Buy but Wish Did Not Exist*, SSRN (Oct. 26, 2023), at 8, https://ssrn.com/abstract=4614052 [https://perma.cc/L7RS-HYV6].

[83] *See* Robert L. Rabin, *Reexamining the Pathways to Reduction in Tobacco-Related Disease*, 15 THEORETICAL INQUIRIES L. 507, 516-517 (2014).

[84] Fairfield & Engel, *supra* note 26, at 398.

[85] Colleen McClain et al., *How Americans View Data Privacy: The Role of Technology Companies, AI and Regulation—Plus Personal Experiences with Data Breaches, Passwords, Cybersecurity and Privacy Policies*, PEW RSCH. CTR. (Oct. 18, 2023), https://pewrsr.ch/3FoB5QI [https://perma.cc/4UGG-3BXK] (finding that 81% of Americans are concerned about how firms use data about them).

[86] Micah L. Berman, *Tobacco Litigation, E-Cigarettes, and the Cigarette Endgame*, 13 NE. U. L. REV. 219, 226 (2021).

[87] John J. Zefutie, Jr., *From Butts to Big Macs-Can the Big Tobacco Litigation and Nation-Wide Settlement with States' Attorneys General Serve as a Model for Attacking the Fast Food Industry?*, 34 SETON HALL L. REV. 1383, 1387-89 (2004); Anthony J. Sebok, *Pretext, Transparency and Motive in Mass Restitution Litigation*, 57 VAND. L. REV. 2177, 2184-85 (2004).

[88] Zefutie, Jr., *supra* note 87.

[89] *Id.* at 1387, 1393-1394.

consumer privacy. Indeed, commentators increasingly speculate that some forms of privacy litigation may ultimately be unwinnable.[90] For example, in cases involving data breaches, the sheer frequency of breaches may make it difficult to convince a judge that a specific breach caused a particular harm.[91] One could similarly imagine that tobacco litigation might have failed in cases where a judge found that, due to the prevalence of smoking, it was impossible to know whether a harm came from primary or secondary exposure. Therefore, perhaps, plaintiffs seeking to litigate privacy harms likewise would have been unable to establish specific causation.

But this isn't what happened. Tobacco litigation was not permanently blocked by requirements for specific causation. Inspired by strategies from asbestos litigation, the second wave (1983-1991) saw a shift towards strict liability and tort claims focused on the inherently dangerous nature of tobacco products.[92] Courts, however, often limited the industry's liability, holding that smokers had assumed the risk of smoking-related illnesses.[93] Recent social media litigation partly reflects the second-wave tobacco plaintiffs' strategy as well.[94] If the tobacco history is predictive, current challenges to social media or data-privacy-invasive products may similarly flounder when asserting theories of strict liability as to these digital products.

The third wave of tobacco litigation began after 1994, with a strategic shift towards targeting the deceptive marketing and sales practices of the tobacco industry.[95] This era was characterized by class action lawsuits and state-led

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[90] *See, e.g.*, Daniel J. Solove & Danielle Keats Citron, *Standing and Privacy Harms: A Critique of* TransUnion v. Ramirez, 101 B.U. L. REV. ONLINE 62, 62 (2021) ("[T]he U.S. Supreme Court has significantly undermined the effectiveness of many privacy laws."); Summer Elliot, *There's No Understanding Standing for Privacy: An Analysis of TransUnion v. Ramirez*, 37 BERKELEY TECH. L.J. 1379, 1379 (2022) ("[T]he Supreme Court's narrowed standing doctrine also limits effective protection of privacy rights.").

[91] *See* Michael Hooker, Guy P. McConnell, & Jason A. Pill, *Have We Reached the Tipping Point? Emerging Causation Issues in Data-Breach Litigation*, 94 FLA. BAR J. 8, 8 (2020) (noting the challenge of proving causation in data breach cases due to the frequency of breaches and repeated exposure of plaintiffs' personal information). The causation barrier is not specific to privacy but is a more general problem recognized as particularly problematic in the case of negligence liability. *See* Steven Shavell, *An Alternative to the Basic Causal Requirement for Liability Under the Negligence Rule,* 17 J. TORT L. 61, 61 (2024) (observing that "his basic causal requirement may be difficult or impossible to satisfy and hence may interfere with the discouragement of negligence").

[92] *See* Robert L. Rabin, *Institutional and Historical Perspectives on Tobacco Tort Liability*, *in* SMOKING POLICY: LAW, POLITICS, AND CULTURE 119 (Robert L. Rabin & Stephen D. Sugarman eds., 1993).

[93] E.g., Cipollone v. Liggett Group, 693 F. Supp 208, 213, 215 (D.N.J. 1988); Horton v. American Tobacco Co., 667 So. 2d 1289, 1290-1292 (Miss. 1995).

[94] *See, e.g.*, *In re* Social Media Adolescent Addiction/Personal Injury Products Liab. Litig., 702 F. Supp. 3d 809, 812-813 (N.D. Cal. 2023) (order granting in part and denying in part defendants' motions to dismiss) (addressing claims against five social media companies which, like the second-wave tobacco claims, rely in part on a strict liability theory).

[95] Zefutie, *supra* note 87, at 1392-94.

Medicaid reimbursement cases.[96] Internal industry documents provided evidence that the industry had long known about the addictive, harmful, and non-obvious effects of smoking but had deliberately misled the public.[97] These revelations influenced jury perceptions and led to substantial punitive damage awards against the industry, culminating in the landmark Master Settlement Agreement ("MSA") in 1998.[98] Under the MSA, tobacco companies agreed to pay over $200 billion to states and implemented restrictions on their marketing and advertising practices.[99] Although these lawsuits relied on different legal theories, they are comparable to a new approach pursued by government plaintiffs, sometimes school districts, regarding the harms social media allegedly inflicts on the public purse. Government plaintiffs argue that social media constitutes a public nuisance due to the increased difficulty of educating children in an environment with a high prevalence of social media addiction.[100]

Finally, the Family Smoking Prevention and Tobacco Control Act was signed into law in 2009, granting the Food and Drug Administration ("FDA") regulatory authority over tobacco products.[101] This allowed the FDA to implement measures like restricting advertising, requiring ingredient disclosure, and mandating larger health warnings on packaging.[102] However, the law also imposed limits on the FDA's authority, such as prohibiting a complete ban on tobacco products.[103] The Act established a new division within the FDA, known as the Center for Tobacco Products, which was given the authority to formulate and enforce tobacco regulations.[104]

Smoke-free air laws are another form of regulatory protection, justified in their enactments by the need to shield non-smokers from secondhand smoke and to encourage smokers to reduce tobacco use. Thirty-one states and the District of Columbia, as well as over 1,100 cities and counties—altogether covering over 60% of the U.S. population—have laws restricting or prohibiting smoking in some or all

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[96] *See* David Greising & Linda Himelstein, *Does Tobacco Pay Its Way?*, BUS. WK., Feb. 19, 1996, at 89-90.

[97] Zefutie, *supra* note 87, at 1394-97.

[98] *Master Settlement Agreement*, (Nov. 23, 1988), https://www.naag.org/wp-content/uploads/2020/09/2019-01-MSA-and-Exhibits-Final.pdf [https://perma.cc/ZG3Z-59FM].

[99] *Id.* at 57.

[100] *See* Maddie White, *Nation's top doctor says social media could pose risk to kids: Seattle Public Schools calls it an edge for their lawsuit,* K5 (June 7, 2023), https://www.king5.com/article/news/local/seattle/social-media-risk-students-seattle-public-schools-lawsuit/281-f9c4c982-a5b7-4e32-8ff8-61f0458a99de [https://perma.cc/Z6L2-GC53].

[101] Family Smoking Prevention and Tobacco Control Act, Pub. L. No. 111-31, § 3(1), 123 Stat. 1776, 1781 (2009) (codified at 21 U.S.C. § 387 note).

[102] *See* Ricardo Carvajal, David Clissold & Jeffrey Shaprio, *The Family Smoking Prevention and Tobacco Control Act: An Overview*, 64 FOOD & DRUG L.J. 717, 717 (2009).

[103] Sec. 101, § 387g(d)(3), 123 Stat. at 1803 (prohibiting the ban of all cigarettes or requiring that tobacco products not contain nicotine).

[104] Sec. 101, § 387a(e), 123 Stat. at 1787.

public places and workplaces, with varying degrees of comprehensiveness.[105] Many states have extended smoke-free policies to cover e-cigarettes and vaping products, reflecting evolving public health concerns about these products.[106] If we understand smoke-free air laws to be an effort to create safe spaces, there are analogs to these efforts for privacy, such as the Federal Trade Commission ("FTC") proposal to ban the collection of location data at sensitive locations.[107]

Another widely adopted strategy to address the implications of widespread tobacco use is imposing excise taxes on tobacco products, particularly cigarettes.[108] These taxes were originally viewed as "sin taxes" to generate revenue.[109] However, taxes on tobacco products, which are imposed on the federal, state, and local levels, are now recognized by public health leaders as a critical, and possibly the most effective, regulatory measure for reducing the use of combustible tobacco.[110] Analogous efforts have been put forth in the case of privacy, both in the case of informational privacy where data taxes have been contemplated,[111] and also in the case of decisional privacy, where attention-based taxation mechanisms have been explored.[112]

Another significant aspect of tobacco regulation involves the banning or restricting of advertisements that are false or misleading, or that specifically target vulnerable groups, such as teenagers. The FTC oversees the marketing and point-of-sale practices of tobacco companies,[113] and ensures that all packaging prominently displays the legally mandated Surgeon General Warning labels, which

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[105] *Smokefree Air Laws*, AM. LUNG ASS'N (Nov. 17, 2022), https://www.lung.org/policy-advocacy/tobacco/smokefree-environments/smokefree-air-laws [https://perma.cc/WT8V-V6QX]; Daniel G. Orenstein, *Multiunit Housing and Cannabis: Good Laws Make Good Neighbors*, 49 FORDHAM URB. L.J. 475, 491 (2022).

[106] *Smokefree Air Laws*, *supra* note 105.

[107] *See* Lesley Fair, *How "location, location, location" can lead to "enforcement, enforcement, enforcement,"* FED. TRADE COMMI'N (Jan. 18, 2024), at https://www.ftc.gov/business-guidance/blog/2024/01/how-location-location-location-can-lead-enforcement-enforcement-enforcement [https://perma.cc/844W-CULU].

[108] Michelle M. Kwon, *Clearing the Smoke: Using Taxes to Vaporize E-Cigarette Consumption Among Youth and Reduce Harm from Cigarettes*, 43 VA. TAX REV. 211, 223-25 (2023).

[109] Brian F. Yagi, Boris Lushniak & Brian J. Miller, *Appropriate for the Protection of the Public Health: Why We Need Electronic Nicotine Delivery System Product Standards*, 78 FOOD & DRUG L.J. 16, 21 (2023).

[110] *Id.*

[111] Laura Clayton McDonnell, *Time to Tax Data? Why the Next Great Tax Frontier Could Be a Data Tax*, FORBES (Apr. 17, 2024), https://www.forbes.com/sites/lauraclaytonmcdonnell/2024/04/17/time-to-tax-data-why-the-next-great-tax-frontier-could-be-a-data-tax/ [https://perma.cc/AZ3T-F6UR].

[112] Michael Simkovic & Meirav Furth-Matzkin, *Taxing Contractual Complexity*, 26 U. Pa. J. Bus. L. 189 (2024).

[113] PETER C. WARD, FEDERAL TRADE COMMISSION: LAW, PRACTICE AND PROCEDURE 10-4 (Peter C. Ward & Richard Newman eds., 2022).

detail the health risks associated with tobacco use.[114] Likewise, this Article opens by recognizing a recent call by the surgeon general for warning labels on social media in response to these products undercutting information and decision privacy.[115] One can imagine that more detailed proposals might limit the representations that social media firms could make while advertising.

B. The Processed Food Industry

The proliferation of processed foods took off in the 20th century as technological advances allowed for longer shelf lives, lower costs, and more efficient production and distribution of comestibles.[116] With greater supply came greater competition, and companies filled the market with snacks, frozen meals, and beverages containing high amounts of salt, sugar, artificial additives, and unhealthy fats.[117] These foods provided an overabundance of calories while under-delivering vital nutrients. The resulting public health crisis has been further fueled by the prevalence and aggressive marketing of these processed, calorie-dense, nutrient-poor foods.[118]

The harms of processed foods slowly but drastically became apparent over time. Obesity in the United States transformed from a relatively minor issue to a dominant public health concern, seemingly growing in tandem with the processed food industry.[119] Estimates dating back to 1975 showed much lower obesity rates than those of the present day, with every U.S. state now reporting an obesity rate of at least 20%, and several states exceeding 40%.[120]

The processed food industry is thought to create severe social costs, including increased healthcare costs, reduced quality of life for many children and adults, preventable deaths, and numerous health and psychological conditions.[121] There have been calls to implement aggressive new policies to curb and reverse the

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[114] Federal Cigarette Labeling and Advertising Act, Pub. L. No. 89-92, 79 Stat. 282 (1965) (codified at 15 U.S.C. § 1331, 21 U.S.C. § 387c).

[115] Murthy, *supra* note 1.

[116] MICHAEL MOSS, SALT SUGAR FAT: HOW THE FOOD GIANTS HOOKED US 27-41 (2013).

[117] Boyd A. Swinburn et al., *The Global Obesity Pandemic: Shaped by Global Drivers and Local Environments*, 378 LANCET 804, 807 (2011).

[118] *Id.* It is not just prevalence but replacement of healthier foods with Big Food products that further contribute to this issue. *See Food Swamp*, WIKIPEDIA (March 30, 2024), https://en.wikipedia.org/wiki/Food_swamp [https://perma.cc/4BC7-7BZV] (describing areas with high availability of unhealthy food options); *Food Desert*, WIKIPEDIA (December 4, 2024), https://en.wikipedia.org/wiki/Food_desert [https://perma.cc/VU5X-8YCE] (describing areas with limited access to affordable, nutritious food).

[119] We recognize a counter-narrative of body positivity and other movements against body-shaming that may seem to be at odds with our concerns about obesity, but ultimately both arguments are in favor of greater wellbeing.

[120] Courtney Baltz, *TaxRx: Ultra-Processed Foods, Added Sugar, and the Social Cost of Obesity*, 75 FOOD & DRUG L.J. 596, 597 (2020).

[121] Roberta F. Mann, *Controlling the Environmental Costs of Obesity*, 47 ENV'T. L. 695, 701-708 (2017).

national obesity rate, such as "full disclosure" laws, restrictions on unhealthy food advertising, subsidies for nutritional staples, and taxes on unhealthy foods.[122] These proposals for the processed food industry have so far failed to achieve substantial uptake (an example of the lost public health battles we alluded to *supra*).[123] The processed food industry has resisted most of these efforts and wielded its lobbying power to stave off legislation that would impose stricter nutritional standards.[124] These proposed interventions also bear some resemblance to privacy law. Privacy advocates (among others) have advocated for both model cards[125] and data cards[126] in the contexts of digital privacy and ethical artificial intelligence ("AI") concerns. Such interventions have similarly faced resistance from data-intensive industries and have so far failed to achieve widespread uptake.[127]

An early battleground—and cautionary tale—was the push to regulate advertising to children. In the 1970s, consumer advocates petitioned the FTC to ban advertising of unhealthy foods to kids.[128] After intense lobbying from the processed food industry, the FTC decided against a ban.[129] The FTC described the children's advertising proceeding as "toxic to the Commission as an institution:"[130]

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[122] Stephen A. McGuinness, *Time to Cut the Fat: The Case for Government Anti-Obesity Legislation*, 25 J.L. & HEALTH 41, 42 (2012).

[123] Ordinary web browsing activities circa 2024 readily reveal this to be the case. For example, consider that the largest online retailer of the day, Amazon.com, releases model cards only to be used by those *consuming* AWS's machine learning services. *Amazon SageMaker Model Cards*, AMAZON WEB SERVS., https://docs.aws.amazon.com/sagemaker/latest/dg/model-cards.html [https://perma.cc/4YNC-47A9] (last visited Jan 5, 2025). Amazon.com does not appear to release any model or data cards relating to its own use of AI, as far as investigation could reveal.

[124] *See, e.g.*, Jodi Schuette Green, *Cheeseburger in Paradise? An Analysis of How New York State Restaurant Association v. New York City Board of Health May Reform Our Fast Food Nation*, 59 DEPAUL L. REV. 733, 740 (2010).

[125] Margaret Mitchell et al., *Model Cards for Model Reporting*, *in* FAT* '19: PROCEEDINGS OF THE CONFERENCE ON FAIRNESS, ACCOUNTABILITY, AND TRANSPARENCY 220 (2019), https://dl.acm.org/doi/epdf/10.1145/3287560.3287596 [https://perma.cc/W5MG-J8FX] (proposing model cards as structured documentation for machine learning models, providing details on intended use, performance metrics, and potential limitations).

[126] Mahima Pushkarna, Andrew Zaldivar & Oddur Kjartansson, *Data Cards: Purposeful and Transparent Dataset Documentation for Responsible AI*, *in* FACCT '22: PROCEEDINGS OF THE 2022 ACM CONFERENCE ON FAIRNESS, ACCOUNTABILITY, AND TRANSPARENCY 1776 (2022), https://dl.acm.org/doi/epdf/10.1145/3531146.3533231 [https://perma.cc/H6ZX-6F7L] (introducing data cards as standardized documentation for datasets, detailing creation processes, intended use, and other considerations).

[127] *E.g.*, Adam Beam, *California governor vetoes bill to create first-in-nation AI safety measures*, ASSOCIATED PRESS (Sept. 29, 2024), https://apnews.com/article/california-ai-safety-measures-veto-newsom-92a715a5765d1738851bb26b247bf493 (noting industry opposition to AI transparency measures as potentially harmful to innovation)

[128] J. Howard Beales, III, Dir., Bureau of Consumer Prot., FTC, *Advertising to Kids and the FTC: A Regulatory Retrospective That Advises The Present*, FED. TRADE COMM'N 5-7 (Mar. 2, 2004), https://www.ftc.gov/sites/default/files/documents/public_statements/advertising-kids-and-ftc-regulatory-retrospective-advises-present/040802adstokids.pdf [https://perma.cc/RU8P-YTB8].

[129] *Id.* at 7.

[130] *Id*.

> Congress allowed the agency's funding to lapse, and the agency was literally shut down for a brief time. The FTC's other important law enforcement functions were left in tatters. Newspapers ran stories showing FTC attorneys packing their active investigational files in boxes for storage, and entire industries sought restriction of, or even outright exemptions from, the agency's authority. Congress passed a law prohibiting the FTC from adopting any rule in the children's advertising rulemaking proceeding, or in any substantially similar proceeding, based on an unfairness theory.[131]

The FTC linked this strong backlash to two key factors: effective lobbying by the politically powerful food industry and widespread perception that regulating processed food advertising to children was a gross overreach.[132] In an editorial by the Washington Post, the proposal was characterized as a measure to "'shield children from their parents' weaknesses and to save parents from their children's persistent demands."[133] The editorial argued that it is not the government's role to act as a nanny, suggesting that such interventions overstep appropriate regulatory boundaries.[134] This is remarkably strong wording to illustrate the logic of individual culpability initially attached to this issue, going even to the point of suggesting that children should pay the price for their "parents' weaknesses." Yet, similar logic has prevailed with respect to privacy; the FTC's Children's Online Privacy Protection Rule also largely relies on a regime of parental consent to protect children's privacy,[135] again following the logic that children should not be shielded from their parents' poor decisions, no matter the cost and regardless of how difficult and demanding it might be to make better decisions.[136]

The processed food industry has frequently employed a similar narrative in defense of its products and practices by suggesting that obesity stems from individual lack of willpower rather than the industry's influence on dietary choices.[137] It seems this strategy has been successful as individuals continue to ascribe obesity causation to personal failings even as health professionals and government practitioners alike have come to emphasize socio-environmental

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[131] *Id*. at 8.

[132] *Id.*

[133] Editorial, *The FTC As National Nanny*, WASH. POST, Mar. 1, 1978, *reprinted in* MICHAEL PERTSCHUK, REVOLT AGAINST REGULATION 69-70 (1982).

[134] *Id.*

[135] Children's Online Privacy Protection Rule, 89 Fed. Reg. 2034 (proposed Jan. 11, 2024) (to be codified at 16 C.F.R. pt. 312).

[136] *See* discussion *infra* Section IV.G. (discussing the Children's Online Privacy Protection Act, 15 U.S.C. §§ 6501-6505)

[137] *See generally* Kelly D. Brownell et al., *Personal Responsibility and Obesity: A Constructive Approach to a Controversial Issue*, 29 HEALTH AFFS. 379 (2010).

determinants.[138] This seems to mirror the trajectory of the current privacy environment, in which individuals ascribe moral failings to consumers even as experts see privacy choices as largely determined by industrial design choices.[139]

However, in contrast to the backlash against perceived paternalism in the context of regulating processed foods, in recent years there appears to be less substantial opposition to restrictions on children's access to privacy-invasive products, most notably in the case of potentially problematic social media. For example, several states, including Georgia, have introduced legislation requiring parental permission before children can join social media platforms.[140] The apparent lack of significant backlash against such regulations suggests that the public may be more receptive to interventions designed to safeguard children's well-being in the digital age, a significant departure from the resistance encountered in public health efforts targeting processed foods.[141] This lack of concern about undermining the autonomy of children with respect to consuming processed foods also seems to apply with respect to limiting children's access to privacy-relevant or privacy-invasive products; there has been far more activity in proposing and passing legislation related to children's digital privacy than for the adult population.[142]

Leveraging its considerable lobbying influence, the processed food industry has not only fended off regulations that would tighten nutritional standards and restrict marketing but also has pushed for laws that enhance its operational freedom. For instance, the industry has successfully advocated for "commonsense consumption" laws in over twenty states, which prevent obesity-related lawsuits from progressing past summary judgment.[143] The food industry also capitalized on its substantial marketing resources to sidestep FDA regulations and has

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[138] Joe Greener et al., *More of the same? Conflicting perspectives of obesity causation and intervention amongst overweight people, health professionals and policy makers*, 70 SOC. SCI. & MED. 1042, 1047 (2010).

[139] Lev-Aretz & Nielsen, *supra* note 10.

[140] *E.g.*, Jeff Amy, *Georgia joins states seeking parental permission before children join social media*, ASSOCIATED PRESS (Mar. 29, 2024), https://apnews.com/article/georgia-social-media-children-age-porn-pornography-007fae0a3b3f80393b4a7d7a7a8b430a# [https://perma.cc/7BW8-D6SP].

[141] While not motivated solely by privacy considerations, the recent TikTok ban has triggered some public backlash, even though it, too, is said to be mostly manufactured by TikTok. *See* Sapna Maheshwari & David McCabe, *Tik Tok Urges Users to Call D.C. on Ban*, N.Y. TIMES, March 7, 2024, at B1.

[142] *See USA: Children's Privacy Updates*, DATAGUIDANCE, https://www.dataguidance.com/opinion/usa-childrens-privacy-updates [https://perma.cc/J3YY-5F6W] (last visited Sept. 18, 2024) ("Overall, there is a clear trend of increased regulatory focus on protecting children's online privacy and safety, with lawmakers at both the federal and state levels seeking to update existing laws and introduce new measures to address the evolving digital landscape.").

[143] Richard A. Epstein, *What (Not) to Do About Obesity: A Moderate Aristotelian Answer,* 93 GEO. L.J. 1361, 1379-80 (2005). This legislative immunity stands in stark contrast to the tobacco industry, which was unable to gain any such protection from litigation.

championed legislation such as the Dietary Supplement Health and Education Act of 1994, which complicates the FDA's ability to withdraw products from the market and shifts the burden of proof to the FDA to establish the elements of claims about product safety and efficacy.[144] In privacy-invasive industries, firms have also sought to chip away at agencies' power to regulate privacy; for example, Meta recently challenged the constitutionality of the FTC's structure after the Commission sought to strengthen the terms of a consent order about Meta's privacy violations.[145]

Measures such as sugar taxes, designed to disincentivize the consumption of sugar-sweetened beverages and ultra-processed foods, have been sporadically implemented at state and local levels.[146] Some states have implemented bans on selling junk food and soda in public schools.[147] Congress introduced bills such as the Healthy Lifestyles and Prevention America Act,[148] the Fit for Life Act,[149] and the Healthy Foods for Healthy Living Act.[150] Various executive agencies introduced initiatives to promote better nutrition, including the Centers for Disease Control and Prevention's ("CDC") Division of Nutrition, Physical Activity and Obesity, and the U.S. Department of Agriculture's "Eat Smart. Play Hard." campaign.[151] Yet, despite the clear links between some processed foods products and increasing obesity rates, at the time of writing there is no unified federal strategy to address the harms of processed foods.[152] Similarly, despite widespread bipartisan recognition of the desirability and urgency of privacy reform, at the time of writing there is no federal comprehensive privacy strategy, leaving Americans

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[144] Lowell Thomas Brown, *Food Labeling Disclosures and the Commercial Speech Doctrine: Combating America's Growing Problem*, 61 U. LOUISVILLE L. REV. 589, 603 (2023).

[145] Complaint, Meta Platforms, Inc. v. Federal Trade Commission, No. 1:23-cv-03562 (D.D.C. Nov. 29, 2023), ECF No. 1.

[146] *See, e.g.*, Lauren Cedeno, *Global Implementation of Soda Taxes: Is There A Better Solution for Combatting Obesity?*, 45 BROOK. J. INT'L L. 329, 349-352 (2019). *See also* Tyler Rauh, *Regulating Sugar-Sweetened Beverages*, 27 U. MIAMI BUS. L. REV. 269 (2019).

[147] *See, e.g.*, Pupil Nutrition, Health, and Achievement Act of 2001, CAL. EDUC. CODE § 49431.1-.2, .5 (West 2001); MASS. GEN. LAWS ANN. ch. 111, § 223 (West 2011).

[148] Healthy Lifestyles and Prevention America Act, S. 174, 112th Cong. (2011).

[149] Fit for Life Act of 2011, H.R. 2795, 112th Cong. (2011).

[150] Healthy Foods for Healthy Living Act, H.R. 3291, 112th Cong. (2011).

[151] John B. Hoke, *Parens Patriae: A Flawed Strategy for State-Initiated Obesity Litigation*, 54 WM. & MARY L. REV. 1753, 1755-56 (2013).

[152] While healthy food initiatives have struggled to gain traction, pro-processed food bills have seen more success. A bill commonly referred to as the "cheeseburger bill" but in fact titled "The American Personal Responsibility in Food Consumption Act" successfully passed the House, but did not pass the Senate. H.R. 339, 108th Cong. (2004); H.R. 554, 109th Cong. (2005). The bill would have limited liability against food companies from obesity, heart disease, and other health issues caused by consuming their products. *Id.* § 3. The processed food industry lobbied successfully to reject (note by Laura: judging by context clues, I think this might by what was meant?) many state-level "cheeseburger bills." Grace Thompson, *How Commonsense Consumption Acts Are Preventing "Big Food" Litigation*, 41 SEATTLE U. L. REV. 695, 703 (2018).

with a patchwork of states' approaches and spotty protection from aging sector-specific laws a patchwork of states' approaches.[153]

Unable to secure sufficient regulatory victories, public health advocates have also turned to litigation as a tool. Lawsuits have alleged deceptive marketing, failure to warn about health risks, and responsibility for skyrocketing health costs associated with diet-related diseases.[154] In 2003, a landmark case accused McDonald's of deceptive advertising and failing to adequately disclose nutrition information, contributing to obesity-related health issues.[155] The case was dismissed, but it nonetheless sparked a wave of "McDonald's-style" lawsuits against food companies.[156] Yet, courts have largely favored the food industry, placing the onus of managing obesity on consumers rather than on producers or marketers.[157] Privacy plaintiffs, often stymied by judicially imposed requirements to demonstrate cognizable harm, have also struggled to prevail in court against powerful industry actors.[158] Without clear pathways to vindicate their rights in court, consumers are forced to manage their privacy themselves in direct, often fruitless, interactions with firms.[159]

Proponents of stringent regulations argue that individual lifestyle changes, while necessary, are insufficient without robust regulatory support. They advocate for aggressive tax policies, enhanced nutritional education, and greater transparency in food labeling to steer consumer behavior towards healthier

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[153] Caitriona Fitzgerald & Suzy Bernstein, *Full of Holes: Federal Law Leaves Americans' Personal Data Exposed*, ELECTRONIC PRIVACY INFORMATION CENTER (April 27, 2023), https://epic.org/full-of-holes-federal-law-leaves-americans-personal-data-exposed/ [https://perma.cc/87X2-C9PJ].

[154] *See generally* Lainie Rutkow et al., *Legal Action Against Health Claims on Foods and Beverages Marketed to Youth*, 105 AM. J. PUB. HEALTH 450 (2015).

[155] Pelman v. McDonald's Corp., 237 F. Supp. 2d 512, 519 (S.D.N.Y. 2003). Later cases include Pelman v. McDonald's Corp., No. 02 Civ. 7821 (RWS) (S.D.N.Y. Sept. 3, 2003); Pelman v. McDonald's Corp., 396 F.3d 508 (2d Cir. 2005); Pelman v. McDonald's Corp., 396 F. Supp. 2d 439 (S.D.N.Y. 2005); Pelman v. McDonald's Corp., 452 F. Supp. 2d 320 (S.D.N.Y. 2006). For a description of the procedural history and various iterations see William B Werner, Andrew Hale Feinstein & Christian E Hardigree, *The Risk to the American Fast-Food Industry of Obesity Litigation*, 48 CORNELL HOTEL & REST. ADMIN. Q., 201, 203-205 (2007).

[156] *See* Theodore H. Frank, *A Taxonomy of Obesity Litigation*, 28 U. ARK. LITTLE ROCK L. REV. 427, 436-437 (2006).

[157] Alyse Meislik*, Weighing in on the Scales of Justice: The Obesity Epidemic and Litigation Against the Food Industry,* 46 ARIZ. L. REV. 781, 811 (2004) (noting that "(t)he obesity lawsuits have not yet been successful in the courtrooms"); *id.* at 429 ("[O]besity litigation to date has been much more successful in transferring wealth to attorneys than in advancing legitimate public policy concerns."); Nathan K. Bierma, *Food Industry Cooks up Ways to Stymie Suits*, CHI. TRIB., Aug. 15, 2003, § 5, at 1 (explaining that "none of the estimated seven obesity lawsuits nationwide has gained a major victory for plaintiffs.").

[158] *See* Citron & Solove, *supra* note 37, at 800; Spokeo, Inc. v. Robins, 578 U.S. 330, 334 (2016).

[159] Daniel J. Solove, *The Limitations of Privacy Rights*, 98 NOTRE DAME L. REV. 957, 978 (2023).

choices.[160] Public health advocates also call for structural interventions, such as urban design improvements to promote physical activity and revisions to agricultural policies to support healthier food production.[161] Such recommended structural interventions are similar to current efforts in the privacy space by both scholars and policymakers alike, exploring design choices and technical affordances that would promote privacy-enhancing choices, such as the use of friction in design or the ongoing campaign against dark patterns.[162] Despite the calls for personal responsibility vis-à-vis both improved-eating interventions and also privacy self-management, the debates over how to handle both the obesity epidemic and privacy harms often center around the tension between individual choice and regulatory intervention. Critics of heavy-handed regulatory measures argue that such actions infringe on personal freedoms and overstep governmental boundaries.[163] The debate continues, and the problems grow.[164]

C. Opioids

The ongoing opioid epidemic has ravaged communities across the United States, claiming hundreds of thousands of lives and inflicting immense suffering on families and communities.[165] This public health catastrophe can be traced back to the aggressive marketing of prescription opioid painkillers by pharmaceutical companies, coupled with a systematic failure of regulatory oversight.[166] The

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[160] Stephen A. McGuinness, *Time to Cut the Fat: The Case for Government Anti-Obesity Legislation,* 25 J.L. & HEALTH 41, 42 (2012).

[161] Roberta F. Mann, *Controlling the Environmental Costs of Obesity*, 47 ENV'T. L. 695, 696-701 (2017).

[162] *See, e.g.*, William McGeveran, *The Law of Friction*, 2013 U. CHI. LEGAL F. 15, 15-17 (2013) (discussing how design friction can enhance privacy by reducing automatic disclosures of personal information). *See also* Jamie Luguri & Lior Jacob Strahilevitz, *Shining a Light on Dark Patterns*, 13 J. LEGAL ANALYSIS 43, 45-48 (2021) (discussing design techniques known as dark patterns that manipulate user behavior and highlighting efforts to counter such practices to promote privacy-enhancing choices).

[163] Richard A. Epstein, *What (Not) to Do About Obesity: A Moderate Aristotelian Answer*, 93 GEO. L.J. 1361, 1362-1363 (2005).

[164] *See* Jonel Aleccia, *Severe Obesity is on the rise in the US*, ASSOCIATED PRESS (Sept. 24, 2024), https://apnews.com/article/how-common-is-obesity-us-5663c0388b19009eae3834d695710bc4 (discussing the rise of severe obesity, even as obesity rates remain steady).

[165] *About HEAL: The NIH Helping to End Addiction Long-term Initiative*, NAT'L INST. OF HEALTH (Jan. 2023), https://heal.nih.gov/about/opioid-crisis [https://perma.cc/QWE4-E28T] ("More than 100,000 people have been dying annually from drug overdoses, and 75% of those deaths involve opioids (including highly potent synthetic opioids like fentanyl, often in combination with other drugs like stimulants).").

[166] EVALUATION & INSPECTIONS DIV., U.S. DEP'T OF JUST., REP. NO. 19-05, REVIEW OF THE DRUG ENFORCEMENT ADMINISTRATION'S REGULATORY AND ENFORCEMENT EFFORTS TO CONTROL THE DIVERSION OF OPIOIDS, at i (Revised Sept. 2019), https://oig.justice.gov/reports/2019/e1905.pdf [https://perma.cc/JPT4-JTGJ] ("We found that DEA was slow to respond to the significant increase in the use and diversion of opioids since 2000. We also found that DEA did not use its available resources, including its data systems and strongest administrative enforcement

epidemic is often linked to decisions made in the 1990s, when Purdue Pharma, the maker of OxyContin, launched an extensive campaign to market their opioid-based medication as safe, effective, and non-addictive despite a lack of scientific evidence to justify these claims.[167] Purdue deployed sales representatives to promote OxyContin to doctors, downplay its addictive properties, and encourage liberal prescribing practices.[168] The pharmaceutical industry's claims about the low addiction potential of these medications were ultimately proven false.[169] As OxyContin prescriptions soared, so too did rates of opioid addiction and overdose deaths.[170] The parallels to problematic privacy-invasive industries begins here. The absence of scientific evidence to confirm product safety and the cynical attitude towards product risks are reminiscent of the cavalier if not cynical comments that early tech founders of privacy-invasive products have made regarding their commercial practices and user bases.[171]

In the case of opioids, regulatory agencies like the FDA and Drug Enforcement Agency ("DEA") were criticized for failing to scrutinize Purdue's marketing claims and curb the explosive growth of opioid prescriptions.[172] The FDA approved the drug for "moderate" pain and lengthy periods of time, and even allowed Purdue to market it as less addictive than the products of competitors, despite a lack of supporting clinical studies.[173] The FDA also reinforced Purdue's messaging that "abusers" were the "culprits and the problem."[174] This ex-post criticism of the

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tools, to detect and regulate diversion effectively. Further, we found that DEA policies and regulations did not adequately hold registrants accountable or prevent the diversion of pharmaceutical opioids.").

[167] Art Van Zee, *The Promotion and Marketing of OxyContin: Commercial Triumph, Public Health Tragedy,* 99 AM. J. PUB. HEALTH 221, 221-223 (2009); Natalie Marionneaux, *The Road to Hell Is Paved with Good Intentions (and Master Settlement Agreements): Alternatives to Climate Litigation Informed by Cautionary Tales of Tobacco and Opioid*, 12 LSU J. ENERGY L. & RES. 251, 265 (2024).

[168] PATRICK RADDEN KEEFE, EMPIRE OF PAIN: THE SECRET HISTORY OF THE SACKLER DYNASTY 244-246 (2021).

[169] Marionneaux, *supra* note 167 at 265.

[170] Between 1999 and 2017, opioid-related overdose deaths in the United States tripled, and the death rate from synthetic opioids like fentanyl increased sixfold. *Id.*

[171] Nicholas Carlson, *Well These New Zuckerberg IMs Won't Help Facebook's Privacy Problems*, BUS. INSIDER (May 13, 2010), https://www.businessinsider.com/well-these-new-zuckerberg-ims-wont-help-facebooks-privacy-problems-2010-5?IR=T [https://perma.cc/CUY6-8ZPL] (quoting then newly discovered chat transcriptions in which Facebook founder Mark Zuckerberg referred to users of Facebook as "Dumb fucks" for turning over "emails, pictures, addresses, SNS").

[172] Abby Goodnough & Margot Sanger-Katz, *As Tens of Thousands Died, F.D.A. Failed to Police Opioids*, N.Y. TIMES (Dec. 30, 2019), https://www.nytimes.com/2019/12/30/health/FDA-opioids.html [https://perma.cc/Q872-6WTC]; *see also* Farhang Heydari, *The Invisible Driver of Policing*, 76 STAN. L. REV. 1, 66-69 (2024).

[173] Rebecca A. Delfino, *A New Prescription for the Opioid Epidemic: 360-Degree Accountability for Pharmaceutical Companies and Their Executives*, 73 HASTINGS L.J. 301, 318 (2022).

[174] Heydari, *supra* note 172, at 68-69.

involved regulatory agencies is reminiscent of ongoing critiques of the FTC (and analogous European Union authorities) with respect to their approval of previous privacy-sensitive mergers, most notably that of Facebook's acquisition of Instagram,[175] and even reminiscent of criticism by some FTC Commissioners of FTC actions in cases where they argued that an agency's action was disproportionately small relative to the harms a firm caused or the profit it captured from problematic actions.[176] Such mergers in privacy-sensitive spaces served not only to kill off the competition that theoretically could have provided consumers with a variety of privacy options (an unlikely prospect, as firms usually fail to compete with regard to privacy for various reasons),[177] but also resulted in substantially greater privacy risks and incursions as ever more data and associated market power was concentrated in ever fewer hands, likely to the greater detriment of the consumer.[178]

In response to the growing public health crisis, state and local governments, as well as individual plaintiffs, began filing lawsuits against opioid manufacturers and distributors.[179] These lawsuits have alleged various claims, including public nuisance, negligence, fraudulent misrepresentation, and civil conspiracy.[180] While early individual and class-action suits were largely unsuccessful, the shift to parens patriae[181] claims by state and local governments has proven more effective.[182] In a landmark 2019 case, an Oklahoma judge ordered Johnson & Johnson to pay $572 million for deceptively marketing opioids.[183] Other cases have targeted distributors like McKesson Corporation for failing to report and prevent suspiciously large

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[175] *See* David McLaughlin, *Tech Giants Used 'Loopholes' to Duck Merger Reviews, FTC Says*, BLOOMBERG (Sep. 15, 2021), https://www.bloomberg.com/news/articles/2021-09-15/tech-giants-used-loopholes-to-duck-merger-reviews-ftc-says [https://perma.cc/2QQU-US9K].

[176] FED. TRADE COMM'N, FILE NO. 1823109, DISSENTING STATEMENT OF COMMISSIONER ROHIT CHOPRA: IN RE FACEBOOK, INC. 1 (July 24, 2019).

[177] *See* Aileen Nielsen, *Taboo and Technology: Experimental Studies of Data Protection Reform*, 26 N.Y.U. J. LEGIS. & PUB. POL'Y 349, 360-369 (2024).

[178] *See, e.g.*, Dan Goodin, *WhatsApp gives users an ultimatum: Share data with Facebook or stop using the app*, Ars Technica (Jan. 7, 2021), https://arstechnica.com/tech-policy/2021/01/whatsapp-users-must-share-their-data-with-facebook-or-stop-using-the-app/ [https://perma.cc/SA3N-D5KY] (discussing WhatsApp's updated privacy policy mandating data sharing with Facebook and the resulting backlash over user privacy concerns).

[179] Mason A. Leichhardt, *Big Tobacco's Big Settlement: What Pharmaceutical Companies Can Learn to Protect Themselves in Opioid Litigation*, 60 U. LOUISVILLE L. REV. 161, 180 (2021).

[180] Daniel G. Aaron, *Opioid Accountability*, 89 TENN. L. REV. 611, 612-25 (2022).

[181] Nick Cordova, *Parens Patriae and State Attorneys General: A Solution to Our Nation's Opioid Litigation?*, 44 HARV. J.L. & PUB. POL'Y 339, 339 (2021) ("An attorney general's standing to bring these suits relies on the common law doctrine of *parens patriae*, which allows a state to assert 'quasi-sovereign interest[s]' in a judicial forum, including 'the health and wellbeing—both physical and economic—of its residents.'").

[182] Leichhardt, *supra* note 179, at 180.

[183] State *ex rel*. Hunter v. Purdue Pharma L.P., No. CJ-2017-816, 2019 Okla. Dist. LEXIS 3486, at *2, *37-38, *44, *61 (Okla. Dist. Aug. 26, 2019), *rev'd sub nom.* State *ex rel*. Hunter v. Johnson & Johnson, 499 P.3d 719 (Okla. 2021).

opioid shipments.[184] The consolidated multidistrict litigation now has a pending settlement resolution that would entail settlement for an amount that constitutes less than 0.001% of the estimated damages, with the inadequacy of the settlement largely due to the lack of resources and threat of or actual bankruptcy by the implicated tortfeasors.[185] In this respect, there is a crucial difference between the economic impact of the opioid litigation wave and that of potential privacy litigation against Big Tech companies, a difference that plays all the more in favor of pursuing vigorous litigation in the case of Big Tech and privacy incursions. In the case of opioids, the social and economic costs likely outweigh any economic benefits generated by the pharmaceutical industry, as evidenced by the tortfeasors' inability to pay anywhere close to the magnitude of damage actually caused by their products.[186] However, when it comes to digital privacy, the economic value created by Big Tech companies through data collection and utilization may be substantial enough to offset the social harms associated with privacy concerns.[187]

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[184] *McKesson Corporation Agrees to Pay More than $13 Million to Settle Claims that it Failed to Report Suspicious Sales of Prescription Medications*, U.S. DEP'T OF JUST. (May 2, 2008), https://www.justice.gov/archive/opa/pr/2008/May/08-opa-374.html [https://perma.cc/SA3B-7GFF]; *McKesson Agrees to Pay Record $150 Million Settlement for Failure to Report Suspicious Orders of Pharmaceutical Drugs*, U.S. DEP'T OF JUST. (May 2, 2008), https://www.justice.gov/opa/pr/mckesson-agrees-pay-record-150-million-settlement-failure-report-suspicious-orders [https://perma.cc/X48H-M58C].

[185] The settlement that was proposed would have been in the range of 40-50 billion dollars total, while the damages estimate ranges to around $1 billion annually. *See, e.g.*, *JEC Analysis Finds Opioid Epidemic Cost U.S. Nearly $1.5 Trillion in 2020*, U.S. CONGRESS JOINT ECON. COMM. (Sept. 28, 2022), https://www.jec.senate.gov/public/index.cfm/democrats/2022/9/jec-analysis-finds-opioid-epidemic-cost-u-s-nearly-1-5-trillion-in-2020 [https://perma.cc/V6P8-DPFT]. It is contrasted with 4 billion dollar settlement that was at issue in *Harrington v. Purdue Pharma L.P.*, 219 L. Ed. 2d 721 (2024).

[186] Consider that Purdue Pharma has filed for bankruptcy, suggesting at face value that it is unable to pay the cost of its tort liability. Elizabeth Joseph, *Purdue Pharma files for bankruptcy as part of a $10 billion agreement to settle opioid lawsuits*, CNN (Sept. 16, 2019, 3:50 PM), https://www.cnn.com/2019/09/16/us/purdue-pharma-bankruptcy-filing/index.html [https://perma.cc/U7JC-ZPM3]. This is a strong showing that the financial gains by the firm were far less than the harms it imposed as externalities.

[187] It can be difficult to value the social harms and benefits of social media. In any case, there is some reason to believe the degree of harms—at least so far recognized in settlements or in social science experiments—is relatively small compared to the financial gains made by the firms. For example, a 2019 article estimated that Facebook made roughly $200 in profits per American user. On the other hand, recent experimental work in behavioral economics suggests that either the amount Americans would pay to use social media or would pay to turn social media off both fall below $100, implying that an individual's estimates of either the value or harm they receive may be below $100. Of course, these valuations may be wildly off, but we suggest there is enough information available to at least make this assertion plausible. Leonardo Bursztyn et al., *When Product Markets Become Collective Traps: The Case of Social Media*, (Nat'l Bureau of Econ. Rsch., Working Paper No. 31771, 2023), https://www.nber.org/papers/w31771 [https://perma.cc/SKC4-RKJJ]; Robert J. Shapiro, *What Your Data Is Really Worth to Facebook: And Why You Deserve a Cut*, WASH. MONTHLY (July 12, 2019), https://washingtonmonthly.com/2019/07/12/what-your-data-is-really-worth-to-facebook/ [https://perma.cc/8B9Q-3WYH].

The opioid cases have faced challenges establishing direct causation, as opioid availability and prescriptions involve decisions by a dispersed cascade of actors that includes manufacturers, distributors, physicians, pharmacies, patients, and regulatory bodies.[188] Similarly, privacy advocates face comparable difficulties in proving causation for privacy harms.[189] As with opioids and processed foods, the requirements to demonstrate a causal link between a specific action and the resulting privacy harm are often onerous or even insurmountable.

The United States continues to grapple with the ongoing opioid crisis, and both state and federal governments have implemented legislative measures to regulate and control opioid prescriptions. Measures include the classification of opioids into strict schedules that reflect their abuse potential and medical utility, with prescription opioids classified as Schedule II drugs, indicating a high potential for abuse but with accepted medical uses under severe restrictions.[190] States like Massachusetts and Florida have spearheaded efforts to limit opioid prescriptions and enhance monitoring, while nationwide, the CDC and other health-related agencies have set guidelines aimed at curbing misuse.[191] These regulatory frameworks are supported by initiatives such as prescription drug monitoring programs and access to opioid antagonist naloxone to mitigate overdose risks.[192] This ramp-up in regulatory agency activity is similar to ongoing privacy enforcement changes at the FTC, where there is a noticeably more aggressive position on a range of industry practices concerning privacy.[193]

Alongside regulatory efforts, public health campaigns and direct interventions are also making strides to address the opioid crisis. The CDC's Rx Awareness campaign and harm-reduction strategies like needle exchange programs and drug-checking technologies aim to prevent opioid misuse and manage addiction's consequences.[194] Medication-assisted treatment ("MAT"), which combines

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[188] Oliver Kassenbrock, *When Designed Outcomes Are "Unforeseeable": Proximate Causation in the Opioid Crisis*, 56 UIC L. REV. 259, 261-76 (2023).

[189] *See* discussion *supra* Section II.A.

[190] Delfino, *supra* note 173, at 328.

[191] Leichhardt, *supra* note 179, at 165-67.

[192] *See generally* Robert M. Bohler et al., *The Policy Landscape for Naloxone Distribution in Four States Highly Impacted by Fatal Opioid Overdose*s, 6 DRUG & ALCOHOL DEPENDENCE REPORTS (2023).

[193] *See* Dakota M. Coates, *Increasingly Active FTC Pursues Steep Penalties for Data Security and Privacy Practices*, ICEMILLER (Dec. 15, 2022), https://www.icemiller.com/thought-leadership/increasingly-active-ftc-pursues-steep-penalties-for-data-security-and-privacy-practices [https://perma.cc/X3KJ-ECWP].

[194] *See Rx Awareness: Real Stories*, CTRS. FOR DISEASE CONTROL & PREVENTION, https://www.cdc.gov/rx-awareness/stories/index.html [https://perma.cc/C8P8-M2CC] (last visited Nov. 5, 2024).

medications with behavioral counseling to manage withdrawal symptoms and reduce cravings, has also been successfully used.[195]

D. Privacy and Public Health Similarities Need Not Entail Malfeasance or Addiction

The three key case studies—tobacco, processed food, and opioids—all include examples with well-documented and morally troubling corporate malfeasance and addictive-by-design products. But public health is not solely deployed to address corporate malfeasance, nor are the commonalities between past public health struggles and current privacy challenges contingent on intentional misbehavior. Public health goes far beyond mitigating the effects of addictive substances, and likewise the similarities between privacy and public health go far beyond addictive design. We therefore briefly highlight other public health interventions that also bear similarities with current privacy concerns.

One class of public health challenges that cannot be primarily attributed to corporate malfeasance or addiction-by-design are vice products (where "vice" is derived from a health rather than moral perspective) that long predate the rise of the modern corporation. Examples include alcohol and fatty meats, neither of which needed a concerted corporate strategy of misinformation and denial to achieve cultural importance and substantial costs to the public health; humans have long enjoyed meat and alcohol. These products may be enjoyable, possibly to the point of addiction, and consumers of these products can incur significant health costs on a deferred and probabilistic basis, but the products were not designed scientifically by humans to be addictive. The arguably short-sighted or hedonically-motivated consumption of vice products shares similarities with how poor cybersecurity practices or social media addiction can lead to costs that are not immediately visible.[196] In both cases, the short-term hedonic benefits (such as skipping multifactor authentication or heavily using social media) may seem like a good bargain despite the long-term risks. In short, public health challenges can be similar to privacy challenges without entailing any sort of strategic and sophisticated corporate actor to commit malfeasance or enhance the addictive nature of a product or substance.

Another class of public health challenges unrelated to corporate malfeasance or addiction-by-design but, nonetheless, closely resembling privacy issues, involves small or routine health interventions that benefit everyone in society but

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[195] Tyler S. Oesterle et al., *Medication-Assisted Treatment for Opioid-Use Disorder*, 94 MAYO CLINIC PROCEEDINGS 2072, 2073 (2019).

[196] *See Can You Make Up for Years of Poor Eating?*, HARV. HEALTH PUBL'G (Feb. 1, 2018), https://www.health.harvard.edu/staying-healthy/can-you-make-up-for-years-of-poor-eating [https://perma.cc/VJZ4-7RAA] (discussing the consequences of short-sighted unhealthy behaviors and asking, "In your 20s, maybe you sometimes chose fast-food burgers and fries over healthier foods. Perhaps in the decades that followed you pursued a series of fad diets, questionable lifestyle choices, and too many days when you skipped your workout in favor of the couch. You're now repenting for the sins of the past, but the question is, can you undo the damage?").

that would be unlikely or impossible to undertake on an individual basis. While these interventions may clearly be the right thing to do, they pose challenges related to cognitive burdens or informational hurdles that would be unreasonable to address through individual decision-making alone. Examples include adding fluoride to drinking water, banning certain toxic substances from children's products, or designating certain substances to be available by prescription only. These forms of regulation make affirmative choices for the individual (e.g. to consume fluoride),[197] restrict choices for the individual (e.g. no bisphenol A ("BPA") in baby bottles[198]), or even restrict the availability of and access to a product permitted only for certain cases (e.g., prescription medication). Such interventions reduce cognitive load for consumers while affording them positive health outcomes (consuming fluoride) or helping them avoid negative health outcomes (using BPA in children's products). Sometimes these interventions may be more important in promoting the health of a community rather than of specific individuals (e.g., limiting prescriptions of antibiotics to reduce antibiotic resistance).

IV. TRACING PARALLELS: PRIVACY LAPSES AND PUBLIC HEALTH CRISES

The previous section offered historical case studies of three major public health crises in the United States over the past fifty years and highlighted some specific similarities with the current privacy crisis. This section dives deeper into the notable resemblances between public health challenges and privacy challenges.

From the profiles of the industries involved, to the types of information asymmetries fueling consumer exploitation, to the legal and regulatory patterns attempting to curb authorized harms, the tobacco, processed foods, opioids, and privacy crises share unmistakable common threads. These systemic parallels span the business incentives driving corporate misbehavior, the conditions enabling public health risks to proliferate widely before intervention, and the societal stigmas that develop around distinguishing willing users from systemically manipulated victims. In examining these cross-cutting patterns, the shared challenges, histories, and social structures that drove crises across tobacco, processed foods, opioids, and privacy stand out.

A. Similar Industry Profile

Our first claim is that certain industry and market features from past public health challenges and the ongoing privacy crisis suggest that certain economic conditions make the system and pervasive harms that call for a public health framing more likely. The tobacco, processed foods, pharmaceutical, and technology industries have played a significant role in shaping modern society, each exerting immense power and influence within their respective domains. Despite operating in different sectors, these industries exhibit remarkable similarities, characterized by market dominance, aggressive marketing strategies,

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[197] *See* Joe Mullen, *History of Water Fluoridation*, 199 BRIT. DENT. J. 1, 1-4, (2005).

[198] 21 C.F.R. § 177 (2024).

product design prioritizing profits over public welfare, and an aggressive pursuit of growth. We examine each of these characteristics to understand how firms have been able to inflict significant externalities on the U.S. market for decades.

Market Concentration: One of the most striking similarities among the three industries covered in the public health case studies is the high degree of market concentration by a handful of large corporations, despite the extraordinarily large market sizes of the relevant industries. The tobacco industry is controlled by a handful of multinational giants like Philip Morris International, British American Tobacco, and Altria Group.[199] Similarly, the processed foods industry is dominated by a few companies, including Nestlé, PepsiCo, and Kraft Heinz.[200] In the pharmaceutical sector, a small number of firms, including Pfizer, Johnson & Johnson, Merck, and Roche, hold significant market shares.[201] The technology industry also follows this pattern, with companies like Apple, Google, Amazon, and Microsoft exerting enormous influence and capturing the bulk of the market in consumer-facing digital services.[202]

Market dominance has enabled each of these corporations to leverage their vast resources, economies of scale, and brand recognition to maintain their positions and shape consumer preferences. Their financial clout has also allowed them to influence policymakers, lobby against regulations, and acquire smaller competitors,

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[199] *Tobacco Products Global Market Report 2023*, GLOBENEWSWIRE (April 21, 2023), https://www.globenewswire.com/news-release/2023/04/21/2652061/0/en/Tobacco-Products-Global-Market-Report-2023.html [https://perma.cc/WLY5-WMM9]; Eloïse Trenda, *Leading tobacco companies worldwide in 2023, based on market value*, STATISTICA (June 13, 2024) https://www.statista.com/statistics/942132/leading-10-tobacco-companies-worldwide-based-on-net-sales/ [https://perma.cc/A99G-R5Q3] (listing Philip Morris International, British American Tobacco, and Altria Group as the top tobacco companies worldwide by market value, worth approximately $ 155.19 billion, $ 79.15 billion, and $ 69.89 billion, respectively).

[200] *Leading Players in the Food Manufacturing Industry: Profiles and Success Stories*, FOOD MARKETING & TECH. MAG. (Feb 20, 2024), https://fmtmagazine.in/leading-players-food-manufacturing-industry-profiles-success-stories/ [https://perma.cc/L4LP-W7ML]; Samruddhi Yardi, *Top 10 Processed Food Companies | Preparation, Preservation or Modification* (Jul 18, 2024), https://media.market.us/top-10-processed-food-companies/?utm [https://perma.cc/4BDC-EAKG] (listing Nestlé, PepsiCo, and Kraft Heinz as among the top companies in the industry, with $103.5 billion, $ 91.4 billion, and $ 26.6 billion in annual revenue).

[201] Matej Mikulic, *Leading Pharmaceutical Companies Worldwide Based on Market Share in 2022*, STATISTA (Feb 6, 2024), https://www.statista.com/statistics/309425/prescription-drugs-market-shares-by-top-companies-globally/ [perma.cc/N7FM-DUCX] (noting that the four companies hold 25% of the market share of the global pharmaceutical industry).

[202] Federica Laricchia, *Leading Tech Companies Worldwide 2024, by Market Capitalization,* STATISTA (Mar 24, 2024), https://www.statista.com/statistics/1350976/leading-tech-companies-worldwide-by-market-cap/ [perma.cc/L8XR-RYYM]; *Top publicly traded tech companies by revenue*, COMPANIESMARKETCAP.COM, https://companiesmarketcap.com/tech/largest-tech-companies-by-revenue/ [https://perma.cc/24EK-ARKD] (last visited Jan 5, 2025) (listing Amazon, Apple, Alphabet (Google), and Microsoft as the four largest tech companies by revenue, with $ 620.12 billion, $ 391.03 billion, $ 339.85 billion, and $ 254.19 billion in annual revenue).

further consolidating their power.[203] It may be that this market consolidation has, to a certain degree, stifled competition.[204] Indeed, the digital sector is characterized by a notable absence of competition when it comes to offering privacy-protective features, although the reasons for this are contested.[205]

Aggressive Marketing Strategies: Another shared characteristic among these industries is the use of aggressive and often controversial marketing strategies. The tobacco industry has a long history of running deceptive advertising campaigns, targeting vulnerable populations like the youth and downplaying the health risks associated with smoking.[206] Similarly, the processed foods industry has been criticized for its relentless marketing of unhealthy, highly addictive products, particularly to children.[207] The pharmaceutical industry has faced scrutiny for its forceful marketing of opioids, which included funding professional societies and deploying an extensive network of "detailers" who visited doctors' offices to promote opioid prescriptions and offer gifts to physicians.[208] The technology industry has leveraged behavioral and data-driven insights to create highly engaging and addictive products, raising concerns about excessive screen time and social media addiction.[209] Moreover, many tech companies not only serve as platforms for advertising but also heavily invest in advertising themselves to drive demand for their own products and services.[210]

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[203] *See* case studies discussed *supra* Section III. (examining how each of the industries highlighted have leveraged their financial and political power to influence policy through lobbying, litigation, regulatory challenges, and public perception strategies, with critiques over the consolidation of market power particularly targeted at the tech industry); *see also* Steven Callander et al., *Market Competition and Political Influence: An Integrated Approach*, 90 ECONOMETRICA 2723, 2725 (discussing how firms leverage financial and capability-based advantages to secure political protection, enabling them to influence policymakers, resist regulations, and consolidate market power through reduced competition).

[204] *See* Callander, *supra* note 203.

[205] *See* Nielsen, *supra* note 177 (discussing the failings of ordinary people to trade privacy rationally in a market. This offers insights into why the explanation for a lack of competition as to privacy options occurs: there is a consensus that individuals typically do not bargain hard for privacy in digital markets, even if scholars do not agree as to the explanation.).

[206] K. Michael Cummings*, Marketing to America's youth: Evidence from Corporate Documents*, 11 TOBACCO CONTROL i5, i5 (2002).

[207] Beales, *supra* note 128.

[208] *See* Mariano-Florentino Cuéllar & Keith Humphreys, *The Political Economy of the Opioid Epidemic,* 38 YALE L. & POL'Y REV. 1, 17 (2019).

[209] *E.g.*, Devi B. Dillard-Wright, *Technology Designed for Addiction*, PSYCHOLOGY TODAY (Jan. 4, 2018), https://www.psychologytoday.com/us/blog/boundless/201801/technology-designed-addiction?utm_source=chatgpt.com.

[210] Indeed, Meta has aggressively ramped up its advertising spending on recent years, up to a maximum in 2021 of $3 billion dollars. Stacy Jo Dixon, *Annual advertising expense of Meta Platforms from 2014 to 2023*, STATISTA (Feb. 12, 2024), https://www.statista.com/statistics/685531/facebook-ad-expense/ [perma.cc/XT9N-FNGM]. Considering that global advertising spend for all forms of advertising was around $600 billion in that same year, this means a single digital platform accounted for 1/200 of all global ad spending. *See* Statista Research Department, *Digital*

Product Design Reflects Misalignment Between Profit and Quality: Due to the deferred harms that invariably occur with the use of tobacco, processed foods, and opioids, there is a built-in tension between pursuing profitability and enhancing consumer welfare for all three studied products. In some cases, this has been accidental or incidental, while in others it has been by design. The same is true for many privacy-invasive products, where the harms from the products as currently designed can outweigh the benefits, not only for some individuals but possibly for society as a whole.[211] The tobacco industry has invested heavily in enhancing the addictive properties of its products, making them more appealing and harder to quit.[212] The processed foods industry has engineered foods to be highly palatable, often by incorporating excessive amounts of sugar, salt, and unhealthy fats, contributing to obesity and chronic diseases.[213] In the pharmaceutical sector, the opioid crisis has highlighted that companies, while knowing that their products were highly addictive, downplayed their risks and aggressively marketed the products anyway.[214] Similarly, the technology sector has come under scrutiny for its controversial data practices and addictive product designs.[215] The constant pursuit of profits in all these industries has allegedly incentivized companies to exploit psychological vulnerabilities to maximize screen time and data extraction, with little concern over privacy and security risks.[216]

Resistance to Regulation: Despite growing concerns about the negative impacts of their products and practices, and often despite internal awareness of the harms their products were likely causing, these industries have historically resisted tighter regulations and accountability measures. The tobacco industry has fought against tobacco control measures and warning labels, while the processed foods industry has lobbied against stricter labeling requirements and nutritional

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advertising spending worldwide from 2021 to 2027, STATISTA (April 3, 2024), https://www.statista.com/statistics/237974/online-advertising-spending-worldwide/ [perma.cc/9DYE-D22T].

[211] We recognize an ongoing debate as to the difficulty of defining user welfare when it comes to many privacy-invasive digital products, such as IoT devices or social media. *See* Zachary D. Liscow & Daniel Markovits, *Democratizing Behavioral Economics*, 39 YALE J. ON REG. 1217 (2022). *See also* Sunstein, *supra* note 82, at 1-11.

[212] *E.g.*, *How Big Tobacco made cigarettes more addictive*, TRUTH INITIATIVE (Jan. 23, 2018), https://truthinitiative.org/research-resources/harmful-effects-tobacco/how-big-tobacco-made-cigarettes-more-addictive [https://perma.cc/CV5C-3ZKD].

[213] Nora D.Volkow et al., *Reward, Dopamine and the Control of Food Intake: Implications for Obesity,* 15 TRENDS IN COGNITIVE SCI. 37, 39 (2011).

[214] KEEFE, *supra* note 168.

[215] *See* Flayelle et al., *supra* note 74.

[216] *See, e.g.*, Martin J Conyon, *Big Technology and Data Privacy*, 46 CAMBRIDGE J. ECON. 1369, 1369-1372 (analyzing Facebook's dependency on data collection and advertising practices, which culminated in privacy breaches such as the Cambridge Analytica scandal).

guidelines.[217] The pharmaceutical industry has spent hundreds of millions of dollars lobbying legislators to loosen regulatory controls on opioids.[218] Likewise, the technology industry has until recently battled against calls for increased regulatory oversight, particularly in the context of data privacy, content moderation, and antitrust concerns.[219]

Of course, none of the individual characteristics—or even the full set of characteristics—outlined above definitively suggests that these industries were destined to pose a public health risk or be subject to public health regulation. Many of these features are also common in other industries not typically analyzed through a narrow public health lens.[220] Nevertheless, the shared facets of market structure and strategy demonstrate the potential effectiveness of certain public health approaches as valuable tools for privacy advocates. What sets public health apart may be the moral imperative behind arguments to limit market reach and the compelling case for prioritizing overall societal well-being through market constraints rather than expansion.

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[217] Simon Capewell & Ffion Lloyd-Williams, *The Role Of The Food Industry In Health: Lessons From Tobacco?,* 125 BRIT. MED. BULL. 131, 137 (2018) (noting that historians have studied numerous documents from the tobacco industry, uncovering strategies to fund scientific research that cast doubt on smoking's harms. This approach led politicians to cite inconsistent scientific evidence as a reason to delay regulating and taxing tobacco.); Brown, *supra* note 144, at 590.

[218] Cuéllar & Humphreys, *supra* note 208, at 17.

[219] *See* Todd Feathers & Alfred Ng, *Tech Industry Groups Are Watering Down Attempts at Privacy Regulation, One State at a Time,* THE MARKUP (May 26, 2022), https://themarkup.org/privacy/2022/05/26/tech-industry-groups-are-watering-down-attempts-at-privacy-regulation-one-state-at-a-time [perma.cc/GV3L-9UHZ]; *see also* Caitriona Fitzgerald & Kara Williams, *The State Of Privacy, How State "Privacy" Laws Fail to Protect Privacy and What They Can Do Better*, ELECTRONIC PRIVACY INFORMATION CENTER 4 (February 2024), https://epic.org/wp-content/uploads/2024/01/EPIC-USPIRG-State-of-Privacy.pdf [perma.cc/TN2S-YQZZ] (arguing that the tech industry has influenced the creation of lenient privacy laws across the nation). But In recent years, the tech industry has sometimes joined called for regulation in privacy-relevant domains. *See, e.g.*, Clare Duffy, *Microsoft president calls for federal regulation of facial recognition technology*, CNN (June 18, 2020, 6:05 PM), https://www.cnn.com/2020/06/18/tech/brad-smith-microsoft-facial-recognition/index.html [https://perma.cc/UAD8-UTCK]. Further, it is not a foregone conclusion that industry will invariably oppose regulation. For example, the automobile industry is heavily in favor of regulation for purposes of enabling business planning or reliance interests. *See, e.g.*, Coral Davenport & Jack Ewing, *Automakers to Trump: Please Require Us to Sell Electric Vehicles*, NY TIMES (Nov. 21, 2024), https://www.nytimes.com/2024/11/21/climate/gm-ford-electric-vehicles-trump.html.

[220] For example, the cryptocurrency industry has rapidly increased its lobbying expenditures in a bid to influence legislation and resist regulatory oversight, despite concerns about its role in enabling fraud, contributing to financial instability, and causing environmental harm. Arthur Delaney & Igor Bobic, *White House Slams Crypto As Offering 'No Widespread Economic Benefits*,*'* HUFFINGTON POST (Mar 22, 2023, 12:08 PM), https://www.huffpost.com/entry/biden-administration-crypto_n_641b0eb8e4b0bc5cb653bd41? [https://perma.cc/CUU5-X4NA].

B. Information Asymmetries

In the four sectors we examined—tobacco, processed foods, opioids, and digital technologies—information asymmetries have consistently posed challenges. This imbalance of knowledge has allowed these industries to leverage their informational advantage, often at the expense of consumer well-being and informed decision-making.

For decades, the tobacco industry engaged in systematic efforts to conceal the adverse health effects of smoking and the addictive nature of nicotine.[221] This information asymmetry allowed the industry to cultivate a false sense of security among consumers, perpetuating addiction and hindering informed decision-making.[222] The processed foods industry has also been noted for its lack of transparency regarding the nutritional content and potential health risks associated with its products. Food labels can be confusing, and the industry has been accused of using deceptive marketing tactics to promote unhealthy products as healthier alternatives.[223] Likewise, pharmaceutical companies have been downplaying the addictive nature of opioids and aggressively marketing them as safe and effective treatments for chronic pain.[224] Consumers, and their fiduciary healthcare providers, were often unaware of the extent of the risks associated with long-term opioid use. This information asymmetry contributed to the overprescription of opioids, fueling an epidemic of addiction and overdose deaths.[225]

In the digital age, technology companies and other companies with privacy-relevant activities have amassed vast amounts of personal data from consumers, often without consumers' awareness or understanding of how information is collected, used, and shared. The complexity and opacity of privacy policies[226] further exacerbate this information asymmetry, leaving consumers with limited knowledge about the potential risks and consequences associated with their online activities.[227] Information asymmetry in privacy is likely even more pervasive than

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[221] *See* discussion *supra* Section III.A.

[222] *Id.*

[223] Matthew Walker, *Low-Fat Foods or Big Fat Lies?: The Role of Deceptive Marketing in Obesity Lawsuits*, 22 GA. ST. U. L. REV. 689, 690 (2006) (exploring legal cases related to the misleading advertising of fast food products marketed as healthy).

[224] Sarah DeWerdt, *Tracing the US opioid crisis to its roots*, 573 NATURE S10, S10 (2019).

[225] *Id.* at S11.

[226] Yafit Lev-Aretz & Madelyn Sanfilippo, *One Size Does Not Fit All: Applying a Single Privacy Policy to Too Many Contexts* (2024) (unpublished manuscript) (on file with author).

[227] *See* Yafit Lev-Aretz & Katherine J. Strandburg, *Privacy Regulation and Innovation Policy*, 22 YALE J. L. & TECH. 256, 284-88 (2020) (discussing information asymmetries in personal information transactions).

in the other industries, as it impacts virtually every digital product and service.[228] In contrast to sectors like tobacco and opioids, where issues are confined to specific products, or the food industry, where concerns might focus on processed versus minimally processed foods, privacy concerns span across all digital offerings and into the physical world in their potential consequences.

The products offered by the four industries create a fundamental information asymmetry that consumers struggle to resolve when assessing the product's value, as the harms generated are statistical and delayed rather than certain and immediate. This inherent information gap, combined with the addictive qualities of these products—and thus implicating both informational and decisional privacy—has facilitated and encouraged the growth of these industries. While similar harms may exist in markets not directly related to public health, a key aspect of even the narrowest public health definitions is the focus on widespread threats to public well-being. It is this dangerous combination of information asymmetries and addictive product design that makes these examples, including privacy concerns, particularly relevant from a public health perspective, rather than solely a matter of consumer protection.

C. Probabilistic, Lagged Harms

In the contexts of tobacco, opioids, processed foods, and privacy, the harm typically materializes long after consumers have become frequent users of a product.

The tobacco industry serves as a clear example of this phenomenon. For decades, the hazardous effects of smoking were shrouded in denial and deception. As scientific evidence gradually surfaced, linking tobacco use to a myriad of serious health issues, the industry actively concealed and downplayed these risks.[229] By the time the harmful effects of tobacco use became undeniable, millions were already affected by nicotine addiction.[230]

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[228] For example, in recent years the growing prevalence of smart cars has led to greater concerns about consumer privacy with respect to data collected by automobiles. Press Release, Sen. Ron Wyden, *Wyden Investigation Reviews New Details About Automakers' Sharing of Driver Information with Data Brokers; Wyden and Markey Urge FTC to Crack Down on Disclosures of Americans' Data Without Drivers' Consent* (July 26, 2024), https://www.wyden.senate.gov/news/press-releases/wyden-investigation-reveals-new-details-about-automakers-sharing-of-driver-information-with-data-brokers-wyden-and-markey-urge-ftc-to-crack-down-on-disclosures-of-americans-data-without-drivers-consent [https://perma.cc/94KS-LLN2].

[229] United States v. Philip Morris, 449 F. Supp. 2d. 1, 289-90 (2006) ("it is clear that [cigarette companies] intentionally withheld from public dissemination, from the public health community, and from government authorities, accurate and important information regarding the addictiveness of nicotine in cigarettes.").

[230] INSTITUTE OF MEDICINE, ENDING THE TOBACCO PROBLEM: A BLUEPRINT FOR THE NATION 45 (2007) ("An estimated 20.9 percent of American adults, or 45.1 million people, were current smokers in 2005.").

The processed foods industry has also capitalized on a lag between consumption and realization of harm. Engineered to be highly palatable and addictive, many processed foods are loaded with sugar, salt, and unhealthy fats.[231] However, consumer familiarity with the potential health consequences of consuming these products lagged. Generations of consumers were drawn to the convenience and taste, with consumers compromising their health before fully understanding the consequences of their new consumption patterns.[232]

The opioid crisis reveals a similar pattern of delayed understanding. Initially hailed as a breakthrough in pain management, opioid painkillers were aggressively marketed as safe and effective treatments. However, as prescriptions increased in prevalence and dosage, the true extent of their addictive potential and associated risks remained obscured.[233] It took years of mounting overdose deaths for the public and health authorities to understand the magnitude of the crisis, by which time countless individuals were already suffering from opioid dependence.[234]

Likewise, harms from privacy-sensitive applications often involve temporal disconnects. For example, in the consumer space, as customers embraced the convenience and connectivity of online services, the extent of data collection, privacy violations, and misuse of personal information remained largely opaque. It has taken years of high-profile data breaches, privacy scandals, and mounting public concern for the true risks to come into focus—by which point countless individuals had already become reliant on these services.[235]

But the harms aren't just lagged—they are also probabilistic in nature. Not all lifelong smokers will come down with lung cancer,[236] and not all children who consume large quantities of processed foods will become unhealthy.[237] The same is

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[231] Volkow et al., *supra* note 213.

[232] *Id*.

[233] DeWerdt, *supra* note 224, at S11. ("[O]pioids are not particularly effective for treating chronic pain; with long-term use, people can develop tolerance to the drugs and even become more sensitive to pain. And the claim that OxyContin was less addictive than other opioid painkillers was untrue — Purdue Pharma knew that it was addictive, as it admitted in a 2007 lawsuit that resulted in a US$635 million fine for the company. But doctors and patients were unaware of that at the time.").

[234] *Id*. at S10 ("The death rate from drug overdoses more than tripled between 1999 and 2017, and that from opioid overdoses increased almost sixfold during the same period.").

[235] *See, e.g.*, *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, and Data Sec. of the S. Comm. on Com., Sci., & Transp.*, 117th Cong. (2021). These revelations came to light only around 15 years after Facebook and Instagram had achieved cultural importance and were arguably even indispensable to the social lives of young people.

[236] Zhenqiu Huang et al., *Single-Cell Analysis of Somatic Mutations in Human Bronchial Epithelial Cells in Relation to Aging and Smoking*, 54 NATURE GENETICS 492, 492 (2022).

[237] *See* Huan Hu et al., *Consumption of Soft Drinks and Overweight and Obesity Among Adolescents in 107 Countries and Regions*, JAMA NETWORK OPEN, July 24, 2023, at 1, 5-6.

true for those inappropriately prescribed opioids[238], or for those whose personal information is exploited to inappropriately influence them or steal their assets.[239]

D. Similar Litigation Patterns

The legal efforts on behalf of consumers in the context of tobacco, opioids, processed foods, and privacy have been long-lasting and arduous. The industries have faced numerous legal challenges, with active players ranging from individuals and consumer advocacy class action lawsuits to government entities as plaintiffs. Across the litigation, we identify one common challenge faced in all cases—the difficulty of establishing causation—and two commonly shared legal strategies as most successful in encountering and overcoming the causation challenge—a public nuisance theory and a failure-to-warn or misleading claims theory.

Across all four industries, establishing causation has been a significant obstacle for litigants. In tobacco cases, proving the direct link between smoking and specific health conditions has been a longstanding challenge, as the industry actively sought to obfuscate and downplay scientific evidence.[240] Similarly, in the processed foods context, linking an individual's health issue to a particular product has been complicated by the multifaceted nature of dietary choices and lifestyle factors.[241] Plaintiffs in opioid litigations have also struggled to trace causation due to the compounded nature of addiction and the various other factors that contribute to its development, including individual physiology, environmental influences, and the potential involvement of multiple pharmaceutical companies and prescribers.[242] In privacy litigation, causation has also been quite elusive due to the use of sophisticated algorithms and opaque systems for the collection, analysis, and

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[238] *See Opioid Use Disorder*, AM. PSYCHIATRIC ASS'N, https://www.psychiatry.org/patients-families/opioid-use-disorder [https://perma.cc/M367-FPXK] (last visited Oct. 29, 2024) ("an estimated 3% to 19% of people who take prescription pain medications develop an addiction to them").

[239] Cristina Popov, *Why Breaches Can Affect You Long After They Occur*, BITDEFENDER (Mar. 22, 2023), https://www.bitdefender.com/blog/hotforsecurity/why-breaches-can-affect-you-long-after-they-occur/ [https://perma.cc/MKK7-MFPK].

[240] Robert L. Rabin, *A Sociolegal History of the Tobacco Tort Litigation*, 44 STAN. L. REV. 853, 858 (1992) (discussing the tobacco industry's contesting the causal linkage between smoking and lung cancer). Later this challenge was overcome due to the smoking gun of fraud and deception by tobacco companies. *See* Robert L. Rabin, *Reexamining the Pathways to Reduction in Tobacco-Related Disease*, 15 THEORETICAL INQUIRIES L. 507, 536-37 (2014).

[241] *See, e.g.*, Hoke, *supra* note 151, at 1767-70; Ashley B. Antler, *The Role of Litigation in Combating Obesity Among Poor Urban Minority Youth: A Critical Analysis of Pelman v. Mcdonald's Corp.*, 15 CARDOZO J.L. & GENDER 275, 293-94 (2009); David Burnett, *Fast-Food Lawsuits and the Cheeseburger Bill: Critiquing Congress's Response to the Obesity Epidemic*, 14 VA. J. SOC. POL'Y & L. 357, 377-80 (2007); Ben Falit, *Fast Food Fighters Fall Flat: Plaintiffs Fail to Establish that McDonalds Should Be Liable for Obesity-Related Illnesses*, 31 J.L. MED. & ETHICS 725, 725 (2003).

[242] *See* Leichhardt, *supra* note 179, at 180-81.

monetization of personal data.[243] These complicated and often opaque processes obscure the direct links between specific corporate behaviors and individual instances of privacy breaches or harms.

To circumvent these obstacles, plaintiffs and legal advocates have explored alternative legal strategies, most notably the public nuisance doctrine.[244] In the opioid crisis, public nuisance has emerged as a potentially powerful tool, as it allows plaintiffs to seek compensation for the societal costs and harms inflicted by widespread opioid use, even in the absence of direct causation between a specific company's actions and an individual's addiction.[245] In the context of privacy, recent litigation targeting social media companies, whose business models intrinsically implicate personal data, has also conceptualized excessive user data extraction as an unlawful public nuisance.[246] In a recent case brought against Meta, dozens of states used this litigation tactic to link a social network's business model with addiction in vulnerable populations.[247]

Another shared litigation feature across these industries is that lawsuits have often centered around fraud, misleading information or labeling, and deception. In the tobacco industry, legal claims have revolved around the concealment of health risks and the industry's efforts to soften the addictive nature of nicotine through deceptive advertising and marketing tactics.[248] Similarly, in the processed foods sector, litigation has focused on misleading labeling, deceptive marketing practices, and the failure to disclose the potential health risks associated with processed food products.[249] In the opioid context, legal claims centered on deceptive marketing practices, including exaggerating the benefits of opioids while minimizing their addictive potential and risks, as well as fraud, violations of consumer protection statutes, and the dissemination of misleading information about the safety and efficacy of these powerful painkillers.[250] Within the technology industry, privacy-related lawsuits have centered on deceptive practices, violations of privacy laws, and the failure to adequately disclose data collection and sharing practices to

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[243] *See* Omri Ben-Shahar, *Data Pollution*, 11 J. LEGAL ANALYSIS 104, 125-26 (2019).

[244] *See* Aaron, *supra* note 180, at 623-25. *See also* David A. Dana, *Public Nuisance Law When Politics Fails*, 83 OHIO ST. L.J. 61, 62 (2022).

[245] Aaron, *supra* note 180, at 632-25.

[246] Complaint at 17, 84-89, Seattle School District No. 1 v. Meta Platforms et al., No. 2:23-CV-00032 (W.D. Wash. filed Jan. 6, 2023).

[247] Complaint at 1, Arizona v. Meta Platforms, Inc., No. 4:23-CV-05448 (N.D. Cal. filed Oct. 24, 2023) [hereinafter Arizona Complaint].

[248] *See Philip Morris*, 449 F. Supp. 2d. 1 at 289 ("[I]t is clear that [cigarette companies] intentionally withheld from public dissemination, from the public health community, and from government authorities, accurate and important information regarding the addictiveness of nicotine in cigarettes.").

[249] Jada J. Fehn, *The Assault on Bad Food: Tobacco-Style Litigation as an Element of the Comprehensive Scheme to Fight Obesity*, 67 FOOD & DRUG L.J. 65, 75-77 (2012).

[250] *See* Aaron, *supra* note 180, at 623-25.

consumers.[251] Companies have been accused of obfuscating the extent to which personal data is harvested, analyzed, and monetized, effectively deceiving users about the true nature of their digital footprint. Likewise, some litigation against government entities has alleged misleading claims about data-driven technologies.[252]

Notably, in all of these industries, litigation has rarely, if ever, been effective in addressing or changing the quality of the product itself. For instance, in tobacco, the carcinogenic nature of the tobacco product is the core issue. In processed foods, it is the appealing yet harmful sugar, salt, and fat. For opioids, the issues stem from addiction. For digital products, the issues stem from the technology's addictive quality (driving "user engagement") and the excessive data intensity of products that capture far more data than is actually beneficial to product quality or other elements of user welfare. In each case, including privacy, litigation has failed to significantly impact the fundamental causes of threats to public wellbeing. Instead, public health tools may offer the most effective means of mitigating these harms.

E. Regulatory Paralysis

The tobacco, processed foods, opioid, and technology industries have faced growing scrutiny as evidence of addiction and harm associated with their products began to surface. However, regulators were slow to catch up and take action even as the negative impacts became increasingly apparent. This regulatory paralysis was further compounded by the industries' ability to effectively capture and influence the very agencies tasked with overseeing them. Through lobbying efforts, revolving door hiring practices, and other tactics, these industries were able to shape regulatory landscapes in their favor, exploit loopholes, and stall meaningful oversight that could have addressed the harms they were causing.

The regulatory treatment of the tobacco industry demonstrates a profound failure in regulation. For decades, despite growing evidence of smoking's severe impact on health, regulatory agencies remained largely inactive. This inaction has been attributed to the industry's intense lobbying efforts, which effectively hindered the adoption of critical public health measures such as warning labels on cigarette packs, restrictions on advertising, and other initiatives intended to reduce

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[251] *See, e.g.*, Press Release, Ken Paxton Attorney General of Texas, Attorney General Ken Paxton Secures $1.4 Billion Settlement with Meta Over Its Unauthorized Capture of Data (July 28, 2024), https://www.texasattorneygeneral.gov/news/releases/attorney-general-ken-paxton-secures-14-billion-settlement-meta-over-its-unauthorized-capture [https://perma.cc/R62H-U33U]; Mike Scarcella, *Google Privacy Lawsuits Pile Up After Court Denies Class Action*, REUTERS (July 17, 2024), https://www.reuters.com/legal/transactional/google-privacy-lawsuits-pile-up-after-court-denies-class-action-2024-07-17/ [https://perma.cc/ZMH9-VZHY].

[252] *See, e.g.*, Jonathan Manes & Alexa Van Brunt, *Williams v. City of Chicago*, RODERICK & SOLANGE MACARTHUR JUSTICE CTR., https://www.macarthurjustice.org/case/williams-v-city-of-chicago/ [https://perma.cc/7U5J-DW29] (last visited July 31, 2024).

tobacco consumption.[253] It took persistent advocacy from public health organizations and mounting public pressure before regulators finally began to act. However, even then, the industry's influence remained pervasive, with legal challenges and lobbying efforts continuously seeking to undermine and weaken regulatory measures.[254]

The processed foods industry has followed a similar trajectory. As concerns over the obesity epidemic, diabetes, and diet-related diseases grew, regulators were slow to respond with consumer-protective measures. This lag was exacerbated by the industry's substantial lobbying efforts, which not only obstructed the adoption of stricter nutritional guidelines and marketing restrictions, but also pushed for legislation that significantly limited the industry's liability for diet-related health issues.[255] Even as the scientific evidence accumulated, linking the excessive consumption of sugar, salt, and unhealthy fats to many health issues, regulators remained largely idle. It took years of public outcry and advocacy before even modest steps, such as the implementation of updated nutrition labels and even limited restrictions on marketing to children, were taken.[256]

Regulatory shortcomings and powerful industry lobbying have similarly converged in the federal response to the opioid crisis. The FDA's approval process for OxyContin was marred by numerous oversights and missteps.[257] As evidence about the addictive properties and risks of opioid painkillers piled up, regulators remained inert while pharmaceutical companies promoted these drugs as safe solutions for chronic pain. The industry influence effectively dominated regulatory agencies, delayed critical oversight, and enabled the widespread overprescription of opioids. It was only after years of rising overdose fatalities that regulators finally

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[253] *See* Richard A. Daynard, *Regulating Tobacco: The Need for A Public Health Judicial Decision-Making Canon*, 30 J.L. MED. & ETHICS 281, 282 (2002).

[254] Even today—with e-cigarettes. *See* Sonu Goel et al., *Tobacco Industry Accountability - Current Practices, Emerging Issues and Challenges*, FRONTIERS PUB. HEALTH, Aug. 10, 2023, at 1, 2.

[255] *See* discussion about Cheeseburger Bills, *supra* note 152.

[256] *See* Sandy Skrovan, *The origins and evolution of Nutrition Facts labeling*, FOODDIVE, (Oct. 16, 2017), https://www.fooddive.com/news/the-origins-and-evolution-of-nutrition-facts-labeling/507016/ [https://perma.cc/BR4A-Y59G] (discussing lengthy public advocacy for nutrition labels); William Neuman, *Food Makers Push Back on Ads for Children*, NY TIMES (July 14, 2011), https://www.nytimes.com/2011/07/15/business/food-makers-push-back-on-ads-for-children.html (discussing industry resistance to proposed federal guidelines aimed at reducing unhealthy food advertising directed at children)

[257] *See* Benjamin T. Suslavich, *Overdose: The Public Health Policies That Caused the Opioid Crisis*, 71 CLEV. ST. L. REV. 123, 128-38 (2022) (discussing the FDA approval of OxyContin and the overlooked problems); *see also* Kassenbrock, *supra* note 188, at 264 (arguing that the FDA "permitted Purdue Pharma to make claims about the lower potential for addiction and abuse based off of the controlled release formula that were fully hypothetical").

began implementing tighter prescribing rules and demanding accountability from pharmaceutical companies for their misleading marketing practices.[258]

Regulators have been slow to act in the context of privacy as well, at least until recently. The rapid advancement of digital technologies and the extensive collection of personal data outstripped the pace of regulatory development. Tech companies have leveraged this lag to amass significant amounts of consumer data with minimal regulatory oversight or accountability.[259]

Critics have rightfully condemned this shared regulatory failure. The delayed implementation of tobacco warning labels, nutritional guidelines, opioid prescribing restrictions, and data protection measures has contributed to preventable deaths, chronic illnesses, and widespread privacy violations. Skeptical readers might argue that regulatory lag is an inescapable reality across all sectors, but history proves otherwise. The aviation industry's heavily regulated early years serve as a prime example.[260] In fact, a hallmark of industries that desperately require—but have not yet been subject to—public health oversight is the indeterminate, delayed, and sometimes dispersed nature of their harms. This complexity reduces the likelihood of swift action from legislators and regulators. At its core, the obstacles we identify in privacy regulation are likely symptomatic of more extensive issues in the consumer marketplace, implying that other industries might also benefit from a public health-informed approach rather than persisting in a loosely regulated market.

F. Local Regulatory Activity

When faced with industries propagating public health crises through deceptive practices, misaligned business models, and the aggressive marketing of dangerous products, states and municipalities have sometimes intervened. Through both regulation and litigation, state and local governments have repeatedly filled the gap left by lagging federal enforcement. This tradition spans taking on the tobacco industry, challenging processed food companies, suing opioid manufacturers, and advocating for privacy accountability from prominent technology firms.

On the regulatory front, state and local policies have pioneered innovative public health interventions to curtail risky corporate activities. While the Family

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[258] *See* Lars Noah, *Federal Regulatory Responses to the Prescription Opioid Crisis: Too Little, Too Late?*, 2019 UTAH L. REV. 757, 757-58(2019) (discussing the delayed federal regulatory response to the opioid crisis).

[259] *See* Naula O'Connor, *Reforming the U.S. Approach to Data Protection and Privacy*, COUNCIL ON FOREIGN RELS. (Jan. 2018), https://www.cfr.org/report/reforming-us-approach-data-protection [https://perma.cc/P4WV-EE9Q].

[260] *See Airline Deregulation: When Everything Changed*, NAT'L. AIR & SPACE MUSEUM (Dec. 17, 2021), https://airandspace.si.edu/stories/editorial/airline-deregulation-when-everything-changed [https://perma.cc/UPA2-KBFL].

Smoking Prevention and Tobacco Control Act enhanced federal oversight,[261] states and municipalities led an earlier charge—enacting higher cigarette taxes,[262] raising minimum purchase ages,[263] banning vending machines,[264] and mandating smoke-free public spaces.[265] Philadelphia and Seattle imposed taxes on sugary beverages to discourage consumption of nutritionally vacuous junk foods in low-income neighborhoods,[266] while the federal government has done no more for decades than restate the desirability of limiting sugary beverage intake.

More recently, states and cities have shifted their regulatory focus to the data practices of the tech sector. In the absence of federal privacy legislation, jurisdictions including California, Illinois, Texas, Virginia, and Colorado have established data privacy regimes that subject companies to transparency and consumer protection requirements.[267] And from San Francisco to Boston, cities have proactively restricted corporate surveillance by prohibiting governmental use of facial recognition technologies, creating biometric privacy protections, and regulating surveillance advertising.[268] These pioneering policies provide regulatory road maps for addressing novel societal risks in advance of broader federal action.

States and municipalities have complemented regulatory efforts to curb deep-pocketed corporate interests with active litigation. The landmark lawsuits by state attorneys general against the tobacco industry exemplified this complementary approach.[269] Litigation led by states and cities similarly uncovered the roles of

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[261] Family Smoking Prevention and Tobacco Control Act, Pub. L. No. 111-31, 123 Stat. 1776 (2009)) (codified as amended at 15 U.S.C. §§ 1331-1340, 15 U.S.C. §§ 4401-4408, 21 U.S.C. §§ 387-387u).

[262] *See* Patrick Luff, *Regulating Tobacco Through Litigation,* 47 ARIZ. ST. L.J. 125, 175 (2015); *see also* Eryk Wachnik, *Anti-Smoking Legislation: Why Strong Local Legislation & Action Better Protect the Consumer Than Federal Legislation & Action*, 23 LOY. CONSUMER L. REV. 459, 474-478 (2011).

[263] Wachnik, *supra* note 262, at 483-84.

[264] Paul A. Diller, *Obesity Prevention Policies at the Local Level: Tobacco's Lessons*, 65 ME. L. REV. 459, 460-61 (2013).

[265] *Id.* at 464-74; *see also* Centers for Disease Control and Prevention, *State Smoke-Free Laws for Worksites, Restaurants, and Bars — United States, 2000–2010*, 60 MORBIDITY & MORTALITY WKLY. REP. 472, 472-475 (Apr. 22, 2011) (summarizing contemporary state of state-level smoking bans as applied to specific venues).

[266] PHILA., PA., PHILADELPHIA CODE CHAPTER 19-4100 (2016); SEATTLE, WASH., CODE CH. 5.53, § 5.53.030 (2017).

[267] *US State Privacy Legislation Tracker*, IAPP (July 22, 2024), https://iapp.org/ resources/ article/us-state-privacy-legislation-tracker/ [https://perma.cc/YD4E-HWCR].

[268] *See generally* Ira S. Rubinstein, *Privacy Localism*, 93 WASH. L. REV. 1961 (2018); *see also* Aileen Nielsen, *Can Cities Shape Future Tech Regulation?*, 1 NATURE CITIES 10 (2024) (identifying local tech regulations that include privacy but also go beyond).

[269] *See* Morgan A. McCollum*, Local Government Plaintiffs and the Opioid Multi-District Litigation*, 94 N.Y.U. L. REV. 938, 964-69 (2019); *see also Master Settlement Agreement*, *supra* note 98.

opioid manufacturers.[270] Currently, state attorneys general are exposing how social media's virality algorithms catalyze psychologically toxic content ecosystems for developing adolescents, despite companies' awareness of potential health risks.[271]

Whether imposed judicially or legislatively, this arsenal of state and local public health policies and prosecutorial counterweights that has surfaced across all four industries highlights the role of localized authorities as society's frontline guardians against hazardous corporate actors. In the face of federal inaction, their close proximity to impacted communities and transparency-promoting democratic processes position states and localized authorities to be agile first responders.

G. Safeguarding Vulnerable Populations

Safeguarding vulnerable groups has remained a priority for the U.S. government and specifically for public health advocates. This strategy has also remained a rhetorically successful proposal, often mitigating fears the general public may otherwise have about paternalism or constrained autonomy. The vulnerable group that has attracted the most protection in the privacy and public health realms, both rhetorically and in terms of enacted legislation, is children.

In the tobacco context, the Family Smoking Prevention and Tobacco Control Act focuses on protecting minors from the harms of tobacco by prohibiting its sale to individuals under the age of eighteen and requiring photo identification from those under twenty-six.[272] Following this federal baseline, several cities and states increased the legal purchasing age to twenty-one, with Hawaii and California leading the charge in 2015.[273] The federal government further standardized this age restriction across the U.S. by raising the minimum legal age to buy tobacco products to twenty-one in 2019.[274]

Age-related regulations have also been more successful than most policy proposals to combat the rise of ultra-processed foods. At least nineteen states enacted laws requiring that parents receive information about their children's Body Mass Index ("BMI"), including explanations of BMI significance and the health implications of obesity.[275] The Healthy, Hunger-Free Kids Act not only enhanced the nutritional quality of school meals but also introduced the "Smart Snacks in

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[270] *See* McCollum, *supra* note 269.

[271] *See* Arizona Complaint, *supra* note 247, at 62-70.

[272] 21 C.F.R. § 1140.14 (2010).

[273] Joseph Carlson, *Striking Tobacco Out of Baseball: The Constitutionality of Smokeless Tobacco Bans at Sports Stadiums*, 67 DEPAUL L. REV. 793, 797-98 (2018).

[274] Further Consolidated Appropriations Act, 2020, Div. N., Title I, §§ 603-604, Pub. L. No. 116-94, 133 Stat. 2534, 3123-27 (2019) (codified as amended at 21 U.S.C. § 387f(d)).

[275] Allyn L. Taylor et. al., *The Increasing Weight of Regulation: Countries Combat the Global Obesity Epidemic*, 90 IND. L.J. 257, 279-80 (2015).

School" initiative, which applies stringent nutritional standards to all food and beverages sold to students throughout the school day.[276]

As with other public health amenable domains, privacy advocacy has most particularly translated into legal change when it comes to children. For example, the Children's Online Privacy Protection Act ("COPPA") aims to protect the privacy rights of children.[277] COPPA imposes requirements for obtaining parental consent, limiting data collection and use, and ensuring data security measures are in place. Federal privacy protection is also granted in the context of information that is deemed highly sensitive, such as financial information and health information.[278] However, attempts to broaden the categories of vulnerability have not always been successful. Privacy scholars have argued, for example, that individuals with certain intersectional traits—such as race, socioeconomic status, gender, sexual identity, or religion—are particularly susceptible to privacy violations that can result in emotional, financial, or physical harm.[279] No regulatory measures or proposals specifically address these heightened risks for such groups, whereas additional suggestions for legal protection of children and adolescents continue to accumulate.[280]

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[276] Healthy, Hunger-Free Kids Act of 2010, Pub. L. No. 111-296, § 201, 124 Stat. 3183 (2010) (codified as amended at 42 U.S.C. §§ 1753(b)); National School Lunch Program and School Breakfast Program: Nutrition Standards for All Foods Sold in School as Required by the Healthy, Hunger-Free Kids Act of 2010, 78 Fed. Reg. 39068 (June 28, 2013); FOOD AND NUTRITION SERV., U.S. DEP'T OF AGRIC., A GUIDE TO SMART SNACKS IN SCHOOL (2022), https://fns-prod.azureedge.us/sites/default/files/resource-files/smartsnacks.pdf [https://perma.cc/J53C-LT7N].

[277] Children's Online Privacy Protection Act, 15 U.S.C. §§ 6501-6505. For criticism about it being outdated, see Anna O'Donnell, *Why the VPPA and COPPA are Outdated: How Netflix, YouTube, and Disney+ can Monitor Your Family at No Real Cost*, 55 GA. L. REV. 467, 470 (2020); Elena Allen, *Biometric Data Collection and Use in the Age of Social Media: The Increasing Need for Coppa Updates Given the Decreasing Age of Internet Users*, 49 RUTGERS COMPUT. & TECH. L.J. 369, 396-97 (2023). The main privacy enforcer, the FTC, also acknowledges that children are especially susceptible to marketers' aggressive tactics and may not fully grasp the privacy and safety risks associated with data collection. *See Complying with COPPA: Frequently Asked Questions*, FED. TRADE COMM'N (Jan. 2024), https://www.ftc.gov/business-guidance/resources/complying-coppa-frequently-asked-questions [https://perma.cc/WVZ5-WGMT].

[278] Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191, § 264, 110 Stat. 1936, 2033-34 (1996) (codified as amended at 42 U.S.C. § 1320d-2 note); Fair Credit Reporting Act, 15 U.S.C. §§ 1681b, 1681e (1970).

[279] Among these groups are individuals from low-income, marginalized, and immigrant (particularly foreign-born) communities, survivors of domestic abuse, people who have been incarcerated, activists and journalists, those who have been politically oppressed by society or their culture, people with HIV, LGBTQ individuals, and people with mental health problems. *See, e.g.*, Nora McDonald & Andrea Forte, *Privacy and Vulnerable Populations*, *in* MODERN SOCIO-TECHNICAL PERSPECTIVES ON PRIVACY 337, 337-367 (Bart P. Knijnenburg et al. eds., 2022); Gianclaudio Malgieri & Jędrzej Niklas, *Vulnerable data subjects*, COMP. L. & SEC. REV., July 2020, at 1; Mary Madden et al., *Privacy, Poverty, and Big Data: A Matrix of Vulnerabilities for Poor Americans*, 95 WASH. U. L. REV. 53 (2017).

[280] Consider most recently the Surgeon General's call for warning labels on social media, with such labels targeted towards children and justified by the harms in children that have been associated with social media use. Murthy, *supra* note 1.

H. Informed Choices and (Theoretical if not Actual) Assumed Risks

When it comes to tobacco use, processed foods, opioids, and digital privacy, regulatory efforts have often centered on informing individuals about the associated risks, with the underlying premise being that, once informed, individuals bear responsibility for their choices and the consequences that follow. This approach follows the legal notion of *assumption of risk*, which shifts the onus from corporate entities to individuals who knowingly engage in potentially harmful activities. Though the legal argument appears straightforward—that informed individual choices warrant respect and their consequences should be shouldered by the decision-maker—this perspective has been criticized for overlooking the addictive or unavoidable nature of some products or services.[281]

Tobacco regulations have mostly aimed at informing consumers about the health risks associated with smoking and secondhand smoke exposure.[282] By providing this information, the assumption is that individuals who choose to smoke despite the well-documented risks are thereafter responsible for their actions and the potential consequences. The tobacco industry has attempted to shift the perception of tobacco use from a public health concern to a matter of personal choice, leveraging American values of autonomy and freedom.[283] In the early days, tobacco companies often won court battles because juries were skeptical about compensating plaintiffs who were aware of the risks of smoking.[284] As time passed and people continued to use tobacco despite widespread awareness of its extreme hazards, the view that plaintiffs bear responsibility for assuming the risks of their injuries gained further acceptance.[285] In opinion polls, respondents consistently assert that tobacco use is the decision of the individual smoker, and they consistently attribute smoking-related deaths to smokers rather than cigarette companies.[286]

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[281] *See* Gregory Keating, *Accountability and Addictive Wrongs*, JOTWELL (October 26, 2021), https://torts.jotwell.com/accountability-and-addictive-wrongs/ ("Addiction, like physical disability, is also an impairment of agency. . . . [I]t defeats the normal capacity to avoid using products that you know to be dangerous to your health.").

[282] *See* Family Smoking Prevention and Tobacco Control Act of 2009, Pub. L. No. 111-31, § 2(32), 123 Stat. 1776, 1779 (2009) (codified at 21 U.S.C. § 387 note) ("[R]egulations are narrowly tailored to restrict those advertising and promotional practices which are most likely to be seen or heard by youth and most likely to entice them into tobacco use, while affording tobacco manufacturers and sellers ample opportunity to convey information about their products to adult consumers.").

[283] P.A. McDaniel & R.E. Malone, *Understanding Philip Morris's Pursuit of U.S. Government Regulation of Tobacco*, 14 TOBACCO CONTROL 193, 194-197 (2005).

[284] James A. Henderson, Jr. & Aaron D. Twerski, *Reaching Equilibrium in Tobacco Litigation*, 62 S.C. L. REV. 67, 73-74 (2010); Peter D. Jacobson & Soheil Soliman, *Litigation as Public Health Policy: Theory or Reality?*, 30 J.L. MED. & ETHICS 224, 229 (2002).

[285] *See* Henderson & Twerski, *supra* note 284, at 82.

[286] WILLIAM HALTOM & MICHAEL MCCANN, DISTORTING THE LAW: POLITICS, MEDIA, AND THE LITIGATION CRISIS 229 (William M. O'Barr & John M. Conley eds., 2004); THOMAS R.

A similar pattern has presented itself in the context of processed foods, where regulations have focused on labeling requirements. The Nutrition Labeling and Education Act of 1990 mandated the inclusion of nutrition facts panels on most packaged foods, allowing individuals to make informed choices about their food consumption.[287] Once armed with this information, consumers are assumed to bear responsibility for their dietary choices and any potential health impacts associated with their consumption of processed foods. When the Personal Responsibility in Food Consumption Act was introduced in 2006, Congressman Steve Chabot confirmed that "[t]his bill is not about whether fast food causes obesity. This bill is about self-responsibility."[288]

The ethos of personal responsibility has also surfaced in the opioid crisis. Because opioids are not available for general consumption and are dispensed by prescribing physicians, the personal responsibility narrative has not been as strong as in the other contexts. Still, a model of personal responsibility persists in popular culture. Studies have found that most Americans believe that persons with opioid use disorder lack self-discipline and, therefore, are themselves to blame for the poor choices they make because of their affliction.[289]

The dominant approach in privacy law, privacy as control, emphasizes individuals' right to manage their personal information autonomously.[290] This paradigm underscores the importance of informed decision-making as to the collection, use, and sharing of personal data. Privacy self-management, manifested through notice and consent mechanisms, places the onus on individuals to actively manage their privacy preferences.[291] The European Union's General Data Protection Regulation ("GDPR") as well as many newly enacted U.S. state privacy laws (a second wave of privacy laws)[292] build upon the principles of notice and consent.[293] These laws aim to enhance individuals' ability to manage their privacy by providing them with rights such as the right to access their personal data, the

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MARSHALL, PUBLIC OPINION, PUBLIC POLICY, AND SMOKING: THE TRANSFORMATION OF AMERICAN ATTITUDES AND CIGARETTE USE, 1890-2016 131-32 (2016).

[287] Nutrition Labeling and Education Act of 1990, Pub. L. No. 101-535, §2, 104 Stat. 2353, 2353-57 (codified as amended at 21 U.S.C. §343).

[288] David Burnett, *Fast-Food Lawsuits and the Cheeseburger Bill: Critiquing Congress's Response to the Obesity Epidemic*, 14 VA. J. SOC. POL'Y & L. 357, 396 (2007).

[289] John Kip Cornwell, *The Search for Answers: Overcoming Chaos and Inconsistency in Addressing the Opioid Crisis*, 47 MITCHELL HAMLINE L. REV. 419, 443 (2021).

[290] Neil Richards & Woodrow Hartzog, *Privacy's Trust Gap: A Review*, 126 YALE L.J. 1180, 1182 (2017) ("Thinking of privacy as an issue of personal choice, preferences, and responsibility has powerful appeal. It resonates with American ideals of individualism, democracy, and consumerism.").

[291] *See* Solove, *Privacy Self-Management*, *supra* note 51, at 1880.

[292] Ari Ezra Waldman, *The New Privacy Law*, 55 U.C. DAVIS L. REV. 19, 21 (2021).

[293] *Id.* at 22.

right to request deletion of their data, and the right to opt-out of certain data processing activities.[294]

However, critics argue that this approach is flawed and fails to adequately protect data subjects for several reasons.[295] Conceptually, privacy as control is critiqued for its narrow focus on information privacy, overlooking other dimensions of privacy and societal norms. Additionally, the emphasis on individual autonomy disregards the social context and the complex and networked nature of personal data.[296] Moreover, privacy self-management presupposes that individuals are rational actors capable of making well-informed choices, an assumption that has been proven erroneous by numerous studies showing the influence of bounded rationality effects.[297] The notice-and-consent framework also faces significant challenges from an empirical perspective. The volume and complexity of privacy policies overwhelm consumers, leading to a lack of meaningful consent.[298] Moreover, consumers' limited ability to process information and susceptibility to behavioral biases further undermine the efficacy of notice-and-consent mechanisms.[299] Despite these known failures of the privacy self-management model, once given the opportunity to be informed of data collection practices, individuals are assumed to bear responsibility for any potential privacy risks associated with their online behavior.

The shifting of responsibility from corporate entities to individuals who engage in potentially harmful activities is rooted in the principle of personal autonomy and the belief that individuals should have the freedom to make informed choices, even if those choices carry inherent risks. However, across all four contexts, critics argue that this approach imposes an unfair burden on individuals.[300] The rationale of autonomous and informed choice fails to account for environmental, structural, and behavioral factors that consistently hinder individuals from making fully voluntary and informed decisions.

Of course, the cognitive and behavioral obstacles we identify that get in the way of individuals helping themselves in the markets associated with the case studies of interest here do not necessarily automatically justify government

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

[295] Lev-Aretz & Nielsen, *supra* note 10.

[296] Daniel J. Solove, *Conceptualizing Privacy*, 90 CALIF. L. REV. 1087, 1110 (2002).

[297] Lev-Aretz & Nielsen, *supra* note 10.

[298] Daniel J. Solove, *The Myth of the Privacy Paradox*, 89 GEO. WASH. L. REV. 1, 5 (2020) ("Managing one's privacy is a vast, complex, and never-ending project that does not scale; it becomes virtually impossible to do comprehensively.").

[299] *See* Solove, *Privacy Self-Management*, *supra* note 51, at 1888 (detailing how "cognitive problems . . . present numerous hurdles for privacy self-management" via notice-and-consent mechanisms, including the fact that "(1) people do not read privacy policies; (2) if people read them, they do not understand them; (3) if people read and understand them, they often lack enough background knowledge to make an informed choice; and (4) if people read them, understand them, and can make an informed choice, their choice might be skewed by various decisionmaking difficulties").

[300] *See, e.g.*, Keating, *supra* note 281.

intervention. For example, Edward Glaeser famously opined on whether new insights into irrational human behavior provided evidence either in favor of or against paternalism, largely concluded that various cognitive biases and forms of bounded rationality—many of which we highlight as also harmful to consumers in the context of our case studies and of privacy—might militate towards *less* rather than *more* government decision-making on behalf of the individual.[301] And yet we believe that the extreme circumstances and harms that have been documented in our case studies likely take our topic of interest beyond the models Glaeser offered.[302] Further, given that much of what we explore here would move beyond soft paternalism to hard paternalism, the reforms explored here might circumvent some of the invidious threats Glaeser saw particularly threatened by soft rather than hard paternalism.

V. LESSONS FROM PUBLIC HEALTH FOR PRIVACY ADVOCATES

The previous sections highlighted the parallels between privacy challenges related to digital technologies and widely acknowledged public health crises brought on by three other industries. Many of the systemic characteristics undermining consumer privacy find unfortunate parallels in public health crises. In this section, we home in on the lessons that privacy advocates might plausibly draw from scrutinizing experiences in these similar past situations.

The lessons are not entirely positive. In fact, recognizing the many similarities might dampen any remaining optimism of privacy advocates regarding the long-term prospects of finally resolving the conflict between digital innovation and privacy or improving the actual state of privacy (or privacy health) in the United States.

We begin in Section V.A by describing concepts from public health already found in privacy law scholarship. Employing a public health framework helps to unify various definitions of privacy in the literature and bridge the divide between individual rights and collective interests, demonstrating how privacy, like public health, serves both personal and societal goals. In Section V.B, we then move to challenge the misconception that public health's focus on information collection is incompatible with privacy's emphasis on minimizing data exposure.

Next, we introduce a sliding scale of proposals to bring privacy and public health closer together. This scale extends from a privacy-distinct pole which treats privacy and public health as analogous but separate, to a privacy-merged pole which treats privacy as a public health issue in its own right. We begin in Section V.C at the privacy-distinct pole. Here lies what we believe to be the most intuitive

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[301] Edward L. Glaeser, *Paternalism and Psychology*, 73 U. CHI. L. REV. 133 (2006).

[302] Fully addressing concerns about paternalism are beyond the scope of this work and left for future debate. However, we note that even Glaeser conceded that tobacco might well be an example of successful paternalism. *Id*. at 148 ("Paternalism does seem to have had successes. For example, the 50 percent reduction in cigarette smoking per capita since the Surgeon General's warning in 1965 can be seen as a successful paternalistic intervention (especially of the softer kind).").

and straightforward suggestion: learning from the insights and practical lessons that public health has to offer. Public health has long grappled with curbing individual behaviors that collectively jeopardize community well-being. Its governance frameworks emphasizing proactive, preventative policies could fruitfully inform privacy advocacy efforts to implement upfront safeguards before harms occur.

Moving to the middle ground between the privacy-distinct and privacy-merged poles in Section V.D, we explore the case for viewing privacy harms as inputs into public health crises themselves. Given the well-documented mental health harms that often accompany privacy violations, such as anxiety, stress, and loss of trust, there is a compelling case for public health authorities to take a more active role in addressing privacy concerns as a matter of community well-being.

Then, in Section V.E, we present the most provocative (and possibly problematic) path at the privacy-merged pole: reframing the state of privacy as a public health crisis. This radical perspective involves treating privacy violations as a widespread epidemic, with far-reaching consequences for individual and societal health. By adopting this framing, privacy advocates could potentially leverage the full arsenal of public health interventions, from large-scale awareness campaigns to targeted policy interventions and community-based initiatives.

While all three approaches offer potential value, we acknowledge that the privacy-distinct and middle ground suggestions are more straightforward and actionable in the near-term, whereas the privacy-merged approach of designating the ongoing privacy crisis as a public health emergency represents a more long-term possibility at best (and more likely a long-term, long shot possibility), requiring further study beyond this Article's scope to assess appropriateness.

A. An Undercurrent of Public Health in Privacy Law Scholarship

While our proposal to treat privacy as a public health issue represents a provocative new framing, we recognize that this perspective builds upon and unifies existing observations and proposals across multiple areas of privacy law scholarship. We explore two distinct veins of research where public health principles have emerged as relevant considerations.

1. Discontent with Notice-and-Consent

The long-simmering dissatisfaction with notice-and-consent models of data privacy aligns remarkably with public health critiques of information-centric approaches. Just as public health efforts transitioned away from regimes focused merely on educating individuals about risks toward broader policy interventions,[303]

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[303] Compare Glaeser, *supra* note 301, at 154, which discuss how soft paternalism, such as efforts to stigmatize behavior or to educate regarding the harms of a behavior, may itself render government or voters more amenable to hard paternalism and to increasingly restrictive regulations on the targeted behavior. While Glaeser described this phenomenon to highlight the dangers of soft

a formidable body of work has highlighted the inadequacies of the notice-and-consent paradigm in governing modern data practices. The asymmetries of information and market power likely render truly informed consent illusory in many or likely most digital privacy decisions.[304] Paralleling public health's struggles around risks like tobacco, processed foods, and the opioid crisis, privacy scholars have argued that obfuscated harms and skillful manufacture of demand undercut any functional "choices" for consumers navigating big data's ubiquitous commercial surveillance.[305]

Some privacy legislation in recent years is moving away from a model of individual choice and autonomy. For example, Maryland's newly passed law, the Online Data Privacy Act, has moved from a model permitting consensual sales of personal data to a model in which such transactions are prohibited regardless of consumer consent.[306] This marks a return to an earlier health model of privacy, as exemplified by the Health Insurance Portability and Accountability Act and the Fair Credit Reporting Act, which likewise do not permit all possible consumer opt-outs from privacy protections.[307] Such laws treat privacy as a matter of public health in mandating minimum standards for the public regardless of protests as to autonomy (real or manufactured). Current legal developments and proposals that replace notice-and-consent models with ex ante protections, such as unwaivable rights or impermissible data use, can be understood as employing notions from public health rather than consumer protection; group decision-making overrides individual prerogatives.

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paternalism, in this Article we argue that this is likely a beneficial progression for the three public health case studies as well as for the ongoing privacy crisis. (stating:

> "During the initial period of declining cigarette consumption following the Surgeon General's warning there was little change in the taxation of tobacco, and certainly the most natural interpretation of the reversal of the trend in cigarette consumption is that soft paternal- ism worked. However, the change in beliefs about smoking was also accompanied by an increased desire to regulate and tax cigarettes. Over time, in response to these popular beliefs, the courts and legislatures have increasingly taxed, fined and regulated cigarette consumption. This pattern is not unique to cigarettes. The road to prohibition of alcohol also began with advocates of soft paternalism who tried to change societal norms rather than banning alcohol by law.")

[304] *See, e.g.*, In re Facebook, Inc., Consumer Privacy User Profile Litigation, 402 F.Supp.3d 767, 787-89 (N.D. Cal. 2019) (noting:

> "Facebook contends that the plaintiffs agreed, when they signed up for their accounts, that Facebook could disseminate their 'friends only' information in the way it has done. . . . The parties agree that California law requires the Court to pretend that users actually read Facebook's contractual language before clicking their acceptance, even though we all know virtually none of them did. Constrained by this fiction, the Court must analyze the relevant contractual language to assess whether the users 'agreed' to allow Facebook to disseminate their sensitive information in the ways described in the lawsuit.").

[305] *See* Yafit Lev-Aretz & Aileen Nielsen, *supra* note 10.

[306] *See* Maryland Online Data Privacy Act, H.B. 567, 2024 Gen. Assemb., Reg. Sess. (Md. 2024) (enrolled bill).

[307] *See, e.g.*, *The Security Rule,* U.S. DEP'T OF HEALTH & HUM. SERVS., https://www.hhs.gov/hipaa/for-professionals/security/index.html [https://perma.cc/8CZT-HSES].

2. Dispersed Privacy and Privacy Harms

A second area where public health ideas have surfaced in privacy law involves research into the dispersed and communal nature of privacy and privacy harms. Empirical work has demonstrated the prevalence of negative externalities from individuals' privacy decisions, with ramifications transcending any perceived consent. People's data exists entangled in social networks, relational contexts, and communities—ensuring one person's disclosure potentially jeopardizes others' privacies.[308] Philosophically, these findings reflect group-based conceptualizations of privacy itself as a public good for which appropriate governance requires a less dispersed mechanism than that yielded by individualistic control.

When privacy itself is understood as a socially shared good, the harms too can be social or otherwise dispersed.[309] Smoking tobacco imposes dispersed harms as externalities; secondhand smoke[310] degrades air quality and endangers communities, particularly certain vulnerable groups like children or asthmatics. Surveillance infrastructures—held by the private or public sector—can function similarly; for example, digital surveillance can degrade the citizenry's likelihood to seek out information[311] and inflict socially dispersed harms that fall particularly harshly on vulnerable communities.[312]

B. Privacy as a Tool for Improving Public Health

At the heart of the public health methodology lies an inherent paradox with privacy—the "public health approach" fundamentally relies on comprehensive information gathering and population surveillance to identify risk factors and protective factors influencing community wellbeing.[313] This approach of intensive data collection and monitoring seems antithetical to privacy's core tenets of limiting personal exposure and restricting information flows. The history of public health is rife with instances where individual privacy has been compromised in the name of protecting population health. From the early days of the HIV/AIDS epidemic[314] to

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[308] Viljoen, *supra* note 24; Cohen, *supra* note 22. Nissenbaum, *supra* note 29; Fairfield & Engel, *supra* note 26; Barocas & Levy, *supra* note 64.

[309] Barocas & Levy, *supra* note 64; Viljoen, *supra* note 24.

[310] Indeed, tobacco may also create harms through thirdhand smoke. Jon O. Ebbert, *Why is the smoke from tobacco that stays on surfaces indoors a problem for health?*, MAYO CLINIC (July 4, 2024), https://www.mayoclinic.org/healthy-lifestyle/quit-smoking/expert-answers/third-hand-smoke/faq-20057791.

[311] *See* Alex Marthews & Catherine E. Tucker, *Government Surveillance and Internet Search Behavior*, SSRN 1 (Feb. 17, 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2412564.

[312] *See* Latanya Sweeney, *Discrimination in Online Ad Delivery*, 56 COMMC'NS OF THE ACM 44, 44 (2013).

[313] Jennifer S. Bard, *How Public Health Informed Lawmaking Would Address the Rising Synthetic Opioid Death Toll*, 87 BROOK. L. REV. 657, 676 (2022).

[314] In the 1980s, as HIV/AIDS emerged as a major public health threat, many jurisdictions implemented name-based reporting systems that required healthcare providers to disclose the

the recent COVID-19 pandemic,[315] tensions between privacy and public health have repeatedly come to the fore. Even in the context of more routine public health activities, such as vaccinations, there have been conflicts between individual privacy rights and collective public health goals.[316]

The history of public health also contains disturbing chapters of privacy violations and misuse of surveillance power against minority and marginalized communities. The infamous U.S. Public Health Service's Untreated Syphilis Study at Tuskegee left participating Black men untreated for syphilis infections, even long after standard antibiotic treatments became available.[317] These men—and others who suffered harms as a result of the study, such as the men's sexual partners and descendants—suffered these harms in the name of a study putatively obtaining knowledge to further public health goals. Even decades after the Government settled with victims of the wrongful practices of the Tuskegee study, public health surveillance has often been disproportionately targeted at racialized communities, frequently resulting in discriminatory practices.[318]

The very terminology used in this context highlights the tension between privacy and public health: public health professionals commonly refer to their data activities as "surveillance"—a loaded term evoking privacy violations, unrestrained monitoring, and infringements on civil liberties when transported out of the medical context. From communicable disease tracking to monitoring environmental hazards, the public health toolkit is replete with practices demanding data streams about individuals, their behaviors, and their communities. Such routine surveillance clashes with the principle of data minimization—collecting only the bare minimum

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identities of individuals diagnosed with HIV to public health authorities. Lawrence O. Gostin & James G. Hodge, Jr., *The "Names Debate": The Case for National HIV Reporting in the United States*, 61 ALB. L. REV. 679, 691-93 (1998). While proponents argued that this was necessary for contact tracing and epidemiological surveillance, critics warned that it could deter people from seeking testing and treatment due to fears of stigma and discrimination. *Id.* at 693-96. In some cases, these fears were well-founded, as there were instances of individuals losing their jobs, housing, and insurance after their HIV status was disclosed without their consent. *Id*. at 686.

[315] During the COVID-19 pandemic, a number of countries and regions deployed digital contact tracing apps that collected and shared sensitive personal information, including location data and health status. *See* Tiffany C. Li, *Post-Pandemic Privacy Law*, 70 AM. U. L. REV. 1681, 1702-03 (2021).

[316] For example, the National Childhood Vaccine Injury Act of 1986 established a federal registry that tracks adverse vaccine events across the country. National Childhood Vaccine Injury Act of 1986, Pub. L. No. 99-660, § 2125, 100 Stat. 3755 (codified as amended in 42 U.S.C. 300aa-25). While this registry serves important public health functions, including monitoring vaccine safety, it also raises questions about the appropriate balance between individual medical privacy and societal interests.

[317] *The U.S. Pub. Health Service Untreated Syphilis Study at Tuskegee*, CTRS. FOR DISEASE CONTROL & PREVENTION (Sept. 4, 2024), https://www.cdc.gov/tuskegee/about/index.html [https://perma.cc/T6W4-8RAV].

[318] Christian Powell Sundquist, *Pandemic Surveillance Discrimination*, 51 SETON HALL L. REV. 1535, 1537 (2021).

personal information required for specific authorized purposes.[319] Lengthy data retention periods enabling longitudinal trendspotting could violate purpose limitation principles stipulating that data be destroyed once its specified use has concluded. Public health's preventative mission incentivizes erring toward over-inclusive data acquisition and retention to comprehensively map risk distributions and detect nascent threats before they metastasize.

But there is a counterbalancing pressure on public health authorities, too, such that the urge to collect data is ultimately curbed. While privacy is often viewed as an external constraint on public health initiatives involving personal data, privacy is in fact a practical necessity for the effective practice of public health.[320] Privacy's role as a catalyst for trust, inclusivity, data transparency, and human agency renders privacy indispensable to public health's mission.[321]

More specifically, privacy represents a foundational bioethical principle of the healthcare profession. The duty of nonmaleficence demands protecting patient confidentiality, as breaches can inflict significant personal and societal harm. Moreover, comprehensive privacy protections foster the openness and inclusivity required for public health efforts to function optimally, especially in liberal democratic societies. When communities harbor fears that personal health details could be exposed or misused, they become less likely to engage with public health agencies at all.[322] Robust privacy measures help create supportive environments where all individuals feel safe when accessing services, participating in research studies, and cooperating with disease tracking—increasing perceived institutional trustworthiness.

Such perceived trustworthiness reciprocally catalyzes greater data fidelity flowing back to public health authorities.[323] Individuals are likely to become more

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[319] *Glossary*, EUR. DATA PROTECTION SUPERVISOR, https://www.edps.europa.eu/data-protection/data-protection/glossary/d_en [https://perma.cc/49A2-2X7P] (last visited Jan. 14, 2025).

[320] COMMITTEE ON HEALTH RESEARCH AND THE PRIVACY OF HEALTH INFORMATION, INSTITUTE OF MEDICINE OF THE NATIONAL ACADEMIES, BEYOND THE HIPAA PRIVACY RULE: ENHANCING PRIVACY, IMPROVING HEALTH THROUGH RESEARCH 77-78 (Sharyl J. Nass et al. eds., 2009) ("The bioethics principle nonmaleficence requires safeguarding personal privacy. Breaches of privacy and confidentiality not only may affect a person's dignity, but can cause harm.").

[321] Natalie Ram et al., *The Future of Wastewater Monitoring for the Public Health*, 56 U. RICH. L. REV. 911, 931 (2022) ("Privacy violations can lead to discrimination and stigma, and can also result in a loss of trust and community support for public health measures.").

[322] It is received wisdom in public health communities that historically disadvantaged communities are more concerned about data and more reluctant to share data relative to populations that have not historically experienced mistreatment from public health authorities. *Cf*. Xinzhi Zhang et al., *Big Data Science: Opportunities and Challenges to Address Minority Health and Health Disparities in the 21st Century*, 27 ETHNICITY & DISEASE 95, 102 (2017) (listing "[b]uild[ing] trust to avoid historical concerns and current fears of privacy loss and 'big brother surveillance' through sustainable long-term community relationships (Challenge I)" as one recommendation to use Big Data to address minority health disparities).

[323] Janlori Goldman, *Protecting Privacy to Improve Health Care*, 17 HEALTH AFFS. 47, 48 (1998) ("Without trust that the personal, sensitive information that they share with their doctors will

willing to share full and accurate information about their health status, risk behaviors, and close contacts when confident in privacy assurances. Privacy also provides the stabilizing foundation for public health's evolution into a "learning health system," where insights from comprehensive real-world data streams continuously enhance care practices.[324] Streamlined and standardized privacy-preserving protocols could facilitate seamless data sharing between providers and researchers while resolving current barriers around protecting sensitive personal details. This innovation-privacy symbiosis positions public health for accelerated advances while maintaining ethical commitments to patient dignity.[325]

C. The Privacy-Distinct Pole: Public Health Tools and Insights for Privacy Advocates

Amidst the ongoing battle for information privacy, advocates would be wise to take a page from the public health playbook on what to do and what not to do to protect community welfare. These suggestions at the privacy-distinct end of the spectrum draw on decades of public health initiatives that have grappled with curbing individual behaviors that broadly endanger societal well-being. From limiting tobacco use and alcohol consumption to mandating vaccinations, the field has developed proven governance frameworks emphasizing proactive, preventative policies to enact critical safeguards before harm occurs. Privacy advocates can draw on these public health frameworks even without adopting a more privacy-merged view of privacy as an essential input or aim of public health.

At its core, the public health approach centers on two key principles: highlighting the collective implications of individual choices and implementing upfront protections rather than remedying harms after they've materialized.[326] These tenets apply well to the privacy crisis. Much like secondhand smoke or drunk driving, one person's decision to overshare personal data often directly impacts others whose information becomes exposed or inferable. As many privacy scholars

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be handled with some degree of confidentiality, patients will not fully participate in their own health care. In the absence of such trust, patients will be reluctant to accurately and honestly disclose personal information, or they may avoid seeking care altogether for fear of suffering negative consequences, such as embarrassment, stigma, and discrimination."). Note that Goldman's argument—made after the passage of HIPAA but before the adoption of implementing privacy regulations—makes the same argument of an innovation-privacy synergy as later authors. *See* Deven McGraw & Kenneth D. Mandl, *Privacy Protections to Encourage Use of Health-relevant Digital Data in a Learning Health System*, NPJ DIGIT. MED., Jan. 4, 2021, at 1.

[324] *See* McGraw & Mandl, *supra* note 323, at 5-8 (arguing that comprehensive privacy reform would serve the dual purposes of (1) protecting information that is informative and sensitive but currently not included in categories of protected health information and (2) standardizing and facilitating privacy-respecting data transmission in the service of health research and a continuously learning healthcare system).

[325] *See generally* Yafit Lev-Aretz & Katherine J. Strandburg, *Privacy Regulation and Innovation Policy*, 22 YALE J.L. & TECH. 256 (2020).

[326] *See* discussion *infra* Section V.B.

have argued and shown for years, unfettered data collection creates negative societal externalities that transcend individual actions.

Applying these public health philosophies, privacy advocacy could promote transparency around the societal costs of commercial data practices. Marking invasive data harvesting as a collective threat, privacy campaigns could rally support for protective regulations by bridging individual buy-in and community benefit. Public health's success with shifting once private conditions like smoking and consumption of unhealthy foods into public consciousness could inspire similar awareness-raising for the privacy domain.

Tangible preventative frameworks could draw inspiration from public health's policy toolkit to protect consumer privacy more effectively. Instead of relying on obfuscating consent processes, these frameworks could mandate privacy-preserving practices as societal safeguards and instantiate mechanisms for curtailing financially extractive data practices. By implementing comprehensive privacy safeguards akin to food safety standards and leveraging public awareness campaigns to reshape cultural norms around data sharing, clear boundaries for information collection and use can be set while still allowing for individual choice. Furthermore, establishing auditing processes similar to those of the FDA for approving safe products and practices that benefit public welfare could be adapted to create a "Personal Data FDA" that governs data practices in the interest of consumers. One might take inspiration from the long-held practices of Amish communities. These communities are known to adopt a model similar to a public health model when determining whether and how to use new technologies, focusing on how the technology would benefit their communities economically while also balancing this against concerns about social fragmentation or loss of close-knit social bonds.[327]

Public health interventions, such as tobacco taxes that fund support for smoking cessation programs or sugar taxes that finance healthy eating educational initiatives, could serve as models for regulating data collection practices. Similar levies could be implemented on data collection to fund assistance for those harmed by data-sharing externalities while simultaneously incentivizing more ethical practices within the industry. The implementation of taxes or levies hits a sweet spot by discouraging harmful behaviors while preserving space for individual choice. Interestingly, while the concept of data transfer taxes has been explored in privacy literature,[328] this option has largely remained untapped from a practical standpoint. In fact, the idea of taxation to reflect the economic realities of data

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[327] Tiffany Boyd, *Appropriate Technology in the Context of Amish Society*, 22 ENVIRONMENTS 26, 26-36 (1994) (describing the selective approach, Amish communities take in developing policies to govern the use of technology, with a focus on enhancing community well-being, while ensuring economic viability, in an inquiry, that looks very familiar too many public health debates).

[328] *See, e.g.*, Amanda Parsons & Salome Viljoen, *Valuing Social Data*, 124 COLUM. L. REV. 993 (2024).

wealth, separate from taxation designed to discourage privacy-invasive practices, is another underexplored but potentially necessary practical consideration.[329]

In public health, placing the burden of managing societal risks primarily on individuals has been a proven recipe for failure that perpetuates a vicious cycle of disclosure of risks, personal choice, realized harm, and misplaced victim blame. The public health community is therefore already well-versed in the rewards of moving directly to socially oriented interventions rather than dithering with fictional accounts of individual agency. When it comes to privacy, we are regrettably charting a parallel course to earlier mistakes we have seen in the public health case studies, in again doubling down on regulatory models emphasizing consumer choice as the crux of data protection. Privacy advocates must take a cue from public health's learning journey. Continuing to frame privacy violations as solvable through personal responsibility is a dead-end road traveled before in other contexts.

The first step for privacy advocates to pivot away from mistakes made in earlier public health battles is to reframe the notion of consent itself.[330] In public health, the realization that advisories about smoking risks or nutritional information could never truly enable informed choice for the majority catalyzed a shift towards policies raising the floor of societal protections. Similarly, privacy must move beyond the fictional conception of consent as a static, comprehensive decision separating two binary states. Real consent implies an ongoing process of preference re-evaluation as contexts change.[331] Regulatory regimes must account for this nuanced reality.

D. The Middle Ground: Privacy as an Input to Public Health

Privacy matters immensely for mental wellbeing. Furthermore, the widespread infringement of privacy rights carries social ramifications that stretch beyond individual inconvenience or discomfort, posing a threat to our collective mental health. Following this logic, safeguarding privacy should be recognized as a critical input to safeguarding public health. This insight goes further than viewing privacy as a mere analogy to public health, but does not go as far as the privacy-merged pole, which treats the state of privacy as a public health crisis in its own right. [332]

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[329] *See, e.g.*, Omri Marian, *Taxing Data*, 47 BYU L. REV. 511 (2022).

[330] Privacy advocates might learn from contemplating a public health but also criminal law question that has lately surfaced regarding appropriate presumptions and shows of consent for sexual encounters. This is an area that has moved to be more protective of putative victims over time and might serve as a productive example in the (obviously less fraught) area of information or decision privacy. *Cf.* Ngozi Anyadike-Danes et al., *Defining and Measuring Sexual Consent within the Context of University Students' Unwanted and Nonconsensual Sexual Experiences: A Systematic Literature Review*, 25 TRAUMA, VIOLENCE & ABUSE 231, 239-241 (2024).

[331] Helen Nissenbaum, *Privacy as Contextual Integrity*, 79 WASH L. REV. 119, 119 (2004).

[332] In this discussion we focus on protecting the privacy of the public at large, as a way of enhancing public health. There are also indirect ways in which privacy benefits public health.

We live in manufactured environments of pervasive surveillance. Data brokers amass troves of intimate details without consent.[333] Tech giants collect communications, locations, and other personal information into black box algorithms, exercising unprecedented power over users' awareness, decision-making, and perceived realities.[334] Even frictionless connectivity utilities like wearables, smart homes, and digital assistants surveil us with alarming fidelity, depriving entire generations of the space to safely self-actualize.[335] This has become our society's new normal, although there have been some advocacy steps in the U.S. and successes abroad to limit the creep of frictionless connectivity, at least with respect to the workplace.[336]

Numerous studies have documented that privacy harms actively degrade our psychological welfare. Studies show data insecurity and invasive monitoring environments heighten feelings of stress, anxiety, a profound sense of violation, and loss of trust that compound over time into clinical conditions like depression, emotional withdrawal, hindered self-actualization, social withdrawal, and even post-traumatic stress disorder ("PTSD").[337] Adults subjected to rampant privacy violations at work exhibit burnout and dissociation.[338] Children are a particularly vulnerable population, with deeply entrenched worries that pervasive surveillance from an early age may prevent them from developing a proper understanding of privacy, thus preventing them from reaching the expected status of a fully

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Consider, for example, the inclusion of public health workers in the enumerated categories of specially protected populations in some state anti-doxxing statutes. *See, e.g.*, Colo. Rev. Stat. § 18-9-313 (2023). Particularly as matters of public health become increasingly vulnerable to political polarization, such privacy protections for public health workers may become an indispensable tool in ensuring the basic operation of public health authorities.

[333] *See* Emile Ayoub & Elizabeth Goitein, *Closing the Data Broker Loophole*, BRENNAN CTR. FOR JUST. (Feb. 13, 2024), https://www.brennancenter.org/our-work/research-reports/closing-data-broker-loophole [https://perma.cc/X85H-D65E] (stating that "[t]hird parties like cell phone companies, internet service providers, social media platforms, and app developers collect and hold [personal data] information, often without [consumers'] knowledge, and use it to offer tailored products and more personalized recommendations").

[334] *Id*.

[335] *See* Jason Peres da Silva, *Privacy Data Ethics of Wearable Digital Health Technology*, BROWN U. CTR. FOR DIG. HEALTH (May 4, 2023), https://cdh.brown.edu/news/2023-05-04/ethics-wearables [https://perma.cc/L9MB-H2XH].

[336] *See, e.g.*, James Kachmar, *California Legislature Considers Employee's "Right to Disconnect,"* THE LAB. & EMP. L. BLOG (Apr. 9, 2024), https://www.thelelawblog.com/2024/04/09/california-legislature-considers-employees-right-to-disconnect/ [https://perma.cc/ZUE3-5276]; *Remote Workers and Their Right to Disconnect: Regulating Telework in the EU*, EUR. EMP. SERVS. (May 17, 2024), https://eures.europa.eu/remote-workers-and-their-right-disconnect-regulating-telework-eu-2024-05-17_en/ [https://perma.cc/JT2L-24X7].

[337] *See, e.g.*, Monish Batia, *Racial Surveillance and the Mental Health Impacts of Electronic Monitoring on Migrants*, 62 RACE & CLASS 18, 25-32 (2021).

[338] *See* Jay Stanley, *The Nightmarish Loss of Workplace Privacy*, ACLU (Aug. 26, 2022), https://www.aclu.org/news/privacy-technology/the-nightmarish-loss-of-workplace-privacy?utm ("Employees who know they are being monitored can become anxious, worn down, extremely tense, and angry.").

empowered adult.[339] At a societal scale, widespread erosion of privacy risks a creeping mental health pandemic marked by collective fear, cynicism, and alienation.

This cascade of psychological impacts seems almost intuitive when acknowledging privacy's deeply constitutive role in human consciousness. Privacy has long been theorized as critical for promoting autonomy, freedom of thought, and the ability to experiment with identity formulation away from the pressuring gaze and judgment of others.[340] Deprived of this critical negative space, we lose creativity, spontaneity, and the foundational building blocks of healthy maturation as individuals.[341] A future stripped of privacy projects a world where children can never escape the permanent records captured about their past selves, where context collapses compound the most innocuous misstep into indelible trauma, and where even our innermost affective selves are not sanctuaries but extractable assets to be cataloged, analyzed, and sold to the highest bidder for manipulation.

One pernicious form of privacy harm with devastating personal mental health impacts is identity theft. For victims whose personal data is stolen to impersonate them and drain accounts, rack up fraudulent charges, or even commit crimes under their stolen identity, the psychological and emotional reverberations are severe.[342] They experience crippling anxiety, distrust, feelings of vulnerability, and losses of control that impair all aspects of life.[343] High rates of depression, sleep disturbances, emotional dysregulation, and even PTSD have been documented.[344] Physical symptoms like stress headaches, stomach issues, and other psychosomatic impacts are also common.[345] Recovery from identity theft is an arduous journey often requiring therapy and medication.[346] The shattering of personal privacy boundaries involved leaves indelible mental scars.

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[339] *See* OFFICE OF THE PRIVACY COMMISSIONER OF CANADA, SURVEILLANCE TECHNOLOGIES AND CHILDREN 4-9 (Oct. 2012), https://www.priv.gc.ca/en/opc-actions-and-decisions/research/explore-privacy-research/2012/opc_201210/#toc_e3 [https://perma.cc/U54L-9QL2].

[340] JULIE E. COHEN, CONFIGURING THE NETWORKED SELF: LAW, CODE, AND THE PLAY OF EVERYDAY PRACTICE 131-134 (2012).

[341] *See, e.g.*, Stanley, *supra* note 338 ("There is good evidence that workplace surveillance can be counterproductive for employers. . . . [For instance,] workers were less creative and efficient when they were nervous or feeling they were being watched. . . .").

[342] Tracy Sharp et. al, *Exploring the psychological and somatic impact of identity theft*, 49 J. FORENSIC SCI. 131, 131 (2003).

[343] Cooper Maher et. al, *Nonfinancial Consequences of Identity Theft Revisited: Examining the Association of Out-of-Pocket Losses With Physical or Emotional Distress and Behavioral Health*, 51 CRIM. JUST. BEHAV. 459, 462 (2024).

[344] Jessica Guynn, *Anxiety, Depression and PTSD: The Hidden Epidemic of Data Breaches and Cyber Crimes*, USA TODAY (Feb. 21, 2020), https://www.usatoday.com/story/tech/conferences/2020/02/21/data-breach-tips-mental-health-toll-depression-anxiety/4763823002/ [https://perma.cc/R2ZK-TDC7].

[345] *Id*.

[346] *See* Maher, *supra* note 343, at 477 ("emotional or physical distress from victimization may require medical or psychiatric treatment").

Moreover, the mental health consequences of privacy violations are not evenly distributed across society. Marginalized and vulnerable populations, such as minorities, low-income communities, and those with pre-existing mental health conditions, are often disproportionately affected.[347] The lack of resources and support systems exacerbates the psychological toll, creating a vicious cycle of disadvantage and distress.[348] In this context, criticism of the privacy self-management approach is further reinforced. Because the notion of informed consent is an illusion, individuals, who are left to navigate a labyrinth of choices, often with incomplete information and limited agency, are left feeling helpless and resigned.[349]

Recognizing privacy as a fundamental determinant of public health would contribute to the adoption of a population-level approach to address this crisis. Just as public health initiatives have tackled issues like tobacco use, processed foods, and the opioid crisis, the protection of privacy should be elevated to a matter of collective well-being. This paradigm shift would entail robust regulatory frameworks that prioritize privacy by design, holding companies accountable for data misuse and breaches. It would necessitate large-scale public awareness campaigns to educate individuals about their rights and the potential mental health impacts of privacy violations.

E. The Privacy-Merged Pole: Treating Privacy Violations as an Unchecked Pandemic

What would happen if we treated the current crisis of privacy violations not as an inconvenient tradeoff of the digital age and a matter of the consumer marketplace, but rather as an unchecked epidemic presenting an existential threat to individual and societal wellbeing? This radical reframing—designating unconstrained data exploitation as a public health emergency—could catalyze crucial shifts in how we confront one of the defining challenges of the modern era. By adopting the public health paradigm of proactive prevention and population-level intervention, privacy advocates would be equipped with powerful new tools to combat this affliction corroding human autonomy.

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[347] Shrutti Sannon & Andrea Forte, *Privacy Research with Marginalized Groups: What we Know, What's Needed, and What's Next*, ARXIV 1-2 (June 30, 2022), https://arxiv.org/pdf/2206.15037 [https://perma.cc/E444-L4DS].

[348] *Id*.

[349] JOSEPH TUROW ET AL., ANNENBERG SCHOOL FOR COMMUNICATION, THE TRADEOFF FALLACY: HOW MARKETERS ARE MISREPRESENTING AMERICAN CONSUMERS AND OPENING THEM UP TO EXPLOITATION 3 (2015) ("[A] majority of Americans are resigned to giving up their data—and that is why many appear to be engaging in tradeoffs. Resignation occurs when a person believes a desirable outcome is inevitable and feels powerless to stop it. Rather than feeling able to make choices, Americans believe it is futile to manage what companies can learn about them. Our study reveals that more than half do not want to lose control over their information but also believe this loss of control has already happened.").

At its core, a public health approach views harmful conditions as preventable and controllable through coordinated actions promoting collective welfare[350]—a stark contrast to the prevailing privacy regime predicated on inevitability, optimizing personal risk management, and remediating damages after they occur.[351] This perspective would treat privacy intrusions by corporate data miners and commercialization architectures as de facto health risks demanding systemic interventions. Individualized avoidance would cede primacy to aggressive ex-ante mitigation and preventive enforcement.

Critically, deploying the public health model would align privacy advocacy with established preventive frameworks oriented around continuous monitoring, proactive response, and policy adaptability. Rather than eternal cycles of containment efforts once violations go viral, the field would implement active testing and controls and targeted suppression strategies based on evolving threat assessments, along with public awareness campaigns emphasizing communal impacts beyond isolated incidents. Just as pandemics spur evolving targeted responses like mask mandates and distancing measures until outbreaks subside, privacy harms merit dynamically recalibrated preemptive safeguards to choke illegitimate supply flows, not perpetual triage for exposed populations.

Furthermore, rhetoric and resources intensify when threats transcend philosophical debates over principles and become manifest crises of embodied harm and societal instability. Activating public health's rhetorical framing of privacy harms as an exigent clear and present danger—rather than an abstraction for experts—could significantly boost public consciousness, political willpower, emergency funding prioritization, and institutional buy-in for protective interventions at meaningful scales. If widespread surveillance truly poses systemic hazards akin to pandemics, it warrants the full deployment of public health's field-tested defenses.

Crucially, the public health domain's ethos of encouraging communal solidarity while neutralizing stigma and victim-blaming inertia could prove transformative in combating privacy's entrenched culture of internalized self-reproach. Too often, those suffering privacy abuses engage in counterproductive self-flagellation over "improper" data sharing, even when coercive architectures and strategic dark patterns minimize the very possibility of meaningfully informed consent. A public health paradigm would reframe these "user errors" as reasonably inevitable outcomes of systemic conditions requiring population-scale mitigations, not exceptional user failings worthy of culpability. While as discussed above public health has not always succeeded in this task of neutralizing stigma and victim-blaming, it remains one of its core principles and obligations to society. Reframing

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[350] *See supra* Section II.B.

[351] *See supra* Section II.A. This is a widely accepted description of current privacy law enforcement practices of both state and federal law and as implemented in both private law and regulatory enforcement, including but not limited to the torts system and the statutory powers of the Federal Trade Commission, which is empowered to rectify observed unfair or deceptive trade practices but not to prevent them *ex ante*.

privacy violations through this lens could help absolve individuals of misplaced blame as the burden of containment would shift from personal behavior correction to proactive environmental decontamination via policy interventions surgically isolating bad actors and strengthening community resilience. Pre-exposure prophylaxis through Privacy Enhancing Technologies, robust data privacy regulations, aggressive penalties for violators, and vigorous public data literacy efforts would become the frontline therapeutic arsenal.

The notion of radically reframing unconstrained privacy violations as a public health concern remains an ambitious thought experiment—one meant to provoke deeper consideration of society's apathetic default stance towards this metastasizing crisis. While harnessing public health's intervention frameworks shows theoretical potential for appreciating and combating the crisis of unchecked data exploitation at a systemic level, truly scrutinizing the feasibility and developing implementation models for this paradigm shift would require years of field study, interdisciplinary collaboration, and access to datasets far beyond the scope of this exploratory Article.

We argue for treating privacy as a public health issue, not as an immediately actionable proposal, but as an aspirational goal that jolts stakeholders into recognizing privacy violations for what they truly represent: a clear and present danger to individual and societal well-being. This framing justifies a response on par with other acute public health emergencies, underscoring the urgency and severity of the problem at hand. Even if executing a comprehensive "privacy immunization" protocol proves technologically or politically unfeasible in the short term, reframing the status quo through a public health lens eliminates euphemistic framing that undermines the severity of the current crisis. It exposes the importance of preventing privacy harms from escalating through any and all necessary preventative measures.

VI. CONCLUSION

This Article has endeavored to shine a light on the parallels between the contemporary crisis of information privacy and the struggles against the public health impacts wrought by powerful industries like the tobacco, processed food, and pharmaceutical industries. By tracing the systemic factors that have allowed these commercial interests to repeatedly subvert the public welfare—from information asymmetries to regulatory capture to narratives of individual responsibility—we aimed to provoke a fundamental rethinking of how we conceptualize and protect laws relating to the right to privacy.

The path forward is neither easy nor straightforward. Fully embracing a public health paradigm for protecting information privacy would require a radical shift away from the existing regime of fictional individual consent and towards a framework of proactive, population-level interventions. It would demand resolution of thorny questions about the appropriate balance between individual autonomy and collective well-being, and the role of government in constraining market forces in the name of social welfare.

Yet, as we have seen, these are the very same challenges that the field of public health has grappled with for decades in the face of industries peddling addictive and harmful products. From implementing upfront product safety standards to reshaping social norms around the collective impacts of individual choices, public health offers a rich toolkit for counteracting detrimental corporate decisions and prioritizing community well-being.

Moreover, recognizing information and decision privacy as essential inputs to public health provides a powerful rationale for marshaling the full force of public health's preventative arsenal. As we have explored, the mental health impacts of privacy violations and the psychological toll of pervasive commercial surveillance are not mere individual inconveniences but rather constitute a pressing social problem demanding coordinated interventions.

At its core, this article is a call to action, urging privacy advocates and policymakers to reframe the ongoing erosion of privacy as an urgent public health crisis requiring bold collective action. By learning from the hard-fought (sometimes won, sometimes lost) battles of the public health domain and harnessing proven public health strategies for systemic reform, we can chart a new path forward: one that recognizes privacy as a cornerstone of both individual well-being and societal welfare.