

Taxing Attention

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The rise of social media platforms and other digital businesses have transformed the economy. Companies like Meta and Alphabet have developed a booming industry where advertising revenue drives profits and we, the consumers, provide the product. But what, exactly, are we selling?

For the last decade, the legal and broader academic community has resoundingly categorized this new economy as one focused on data. Consumers use digital platforms like Facebook for “free,” but the platform collects data about the consumer in the process, which is then monetized by selling advertisements. In the realm of tax law, a growing body of work grapples with the complex issues created by the rise of big data. To keep up with any meaningful shift in the economy, a tax system must be able to locate, measure, and subject economic transactions to tax. But digital data is hard to pin down in any meaningful way for tax purposes. How much is our data worth? Where is digital data located, geographically? These issues have stymied tax policymakers and other tax experts across the globe for years.

This Article advocates a fundamental shift in the legal analysis surrounding this new digital economy—particularly the tax law analysis. Specifically, it argues that the primary commodity that is sold to digital platforms by users is not their data; it is their attention. In making this claim, the Article draws on a nascent body of work by economists and other scholars who have argued that the modern economy is more appropriately described as an “attention economy,” rather than one centering on data. The Article argues that transactions between social media companies and users should be reframed as the sale by users of their attention in exchange for the platform’s services. Although data collection is important to the platforms’ businesses, the advertisers ultimately pay for people to pay attention to their ads, not to acquire raw data.

Reframing social media transactions as a sale of consumer attention makes the tax consequences of these exchanges significantly less complex, because the transactions do not involve the sale of a novel intangible asset (digital data). The sale of attention is simply the sale of one’s time—a type of transaction that existed long before digitization. After exploring the tax treatment of the sale of user attention to social media platforms, the Article argues that the monetization of user attention by social media companies merits a policy response. To that end, it proposes a Pigouvian tax on platforms to account for the negative externalities that social media imposes.

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[Acknowledgements to come]

INTRODUCTION

The internet and, more recently, social media platforms, have completely transformed the economic landscape. Thirty years ago, the largest companies in the world included Exxon Mobil, Coca Cola, Raytheon, and Proctor & Gamble.¹ In 2025, the largest companies include Microsoft, Apple, Amazon, Alphabet (owner of Google and YouTube), and Meta (owner of Facebook).² The rise of these tech giants demonstrates a substantial shift from an economy focused on material production to a digital economy. Companies like Meta and Alphabet have developed a booming industry where advertising revenue drives profits and we, the consumers, provide the product. But what, exactly, are we selling?

For the last decade, the legal and broader academic community has resoundingly categorized this new economy as one focused on data.³ Consumers use digital platforms like Facebook for “free,” but the platform collects data about the consumer in the process, which is then monetized by selling the information to advertisers. As one commentator put it, “data is the new oil.”⁴

Phrases like “the data age,” and “big data” abound in legal scholarship. In the realm of tax law, a growing body of work grapples with the complex issues created by the rise of big data.⁵ To keep up with any meaningful shift in the economy, a tax system must be able to locate, measure, and subject economic transactions to tax. But data, an intangible asset that has very little value on an individual basis, is hard to pin down in any meaningful way for tax purposes. How much is data worth? Where is data located, geographically? These issues have stymied tax policymakers across the globe, along with commentators and other tax experts, for years.⁶

This Article advocates a fundamental shift in the legal analysis surrounding this new digital economy—particularly the tax law analysis. Specifically, it argues that the primary commodity that is sold to digital platforms by users is not data; it is attention. In making this claim, the Article draws on a nascent body of work by economists and other scholars who have argued that the modern economy is more appropriately described as an “attention economy,” rather than one centering on data.⁷

Although collecting data is a crucial component to creating profits for digital platforms, the focus on data as the primary commodity in the modern economy overlooks a defining feature of information: it is abundant, and therefore it is cheap.⁸ Economies revolve around competition for scarce resources. If natural resources like oil were so abundant that everyone had access, they

¹ See *Largest S&P 500 Companies by Market Cap (1989-2025)*, <https://www.finhacker.cz/top-20-sp-500-companies-by-market-cap/#2025> (last visited Aug. 4, 2025). See also Chris Hayes, *THE SIREN’S CALL: HOW ATTENTION BECAME THE WORLD’S MOST ENDANGERED RESOURCE* 13-14 (2025).

² *Largest S&P 500 Companies by Market Cap*, *supra* note 1, Hayes, *supra* note 1.

³ See *infra* Part I.

⁴ See, *The World’s Most Valuable Resource Is No Longer Oil, But Data*, *THE ECONOMIST* (May 6, 2017), <https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data>.

⁵ See *infra* Part I.

⁶ See *infra* Part I.

⁷ See *infra* Part II.

⁸ See *infra* Part II.

would not be valuable. So too with information, which is virtually unlimited in the modern era. Rather than data, the scarce and valuable resource for which companies compete in the digital age is, as economist Herbert Simon first observed, “what information consumes...the attention of its recipients.”⁹ A digital platform like Facebook can share our demographics and information about our interests an unlimited number of times with an unlimited number of buyers. But our ability to pay attention to something is inherently limited; there are only so many hours in the day and our minds can only focus on so many things. It is capturing and monetizing user attention that drives many modern digital businesses.¹⁰

This Article focuses on social media platforms, such as Facebook, Instagram, YouTube, and TikTok, to chronicle how monetizing attention has moved to the forefront of the digital economy. It focuses specifically on social media platforms for several reasons. First, social media companies typically do not charge subscription fees, so their revenue models are based almost entirely on monetizing customer attention by selling advertisements.¹¹ Second, because their revenue depends on capturing and maintaining user attention, social media platforms are intentionally designed with addictive features to keep users on the platform as long as possible, including endless feeds, algorithmic content selection, social feedback (e.g., “likes”), and notifications.¹² These tactics are linked to a specific set of harms, including decreased mental health and political polarization, that merit a policy response.

Earlier, important tax scholarship explores the tax treatment of the “free” use of social media platforms by users, arguing that consumers essentially sell their data to the platform in exchange for the platform’s services.¹³ This Article both builds upon and then shifts away from this earlier work, and in doing so, makes three novel arguments. The first core argument is that the transactions between social media companies and users should be reframed as the sale by users of their attention in exchange for the platform’s services. The Article explores the revenue models of the major social media platforms to demonstrate that the platforms make money from advertisers when users *pay attention* to ads – as demonstrated by engagement metrics like clicks. Although data collection is important to the platforms’ businesses, the advertisers generally pay for eyes on their ads, not raw data.¹⁴

The second core claim of the Article is that reframing social media transactions as a sale of consumer attention makes the tax consequences of these exchanges significantly less complex because the transactions do not involve the sale of a novel intangible asset (digital data). The sale of attention is simply the sale of one’s time—a type of transaction that existed long before digitization. Consider a babysitter who reads a book while the children sleep, a focus group participant who watches a television show and provides feedback, or a seat filler at an awards show. If paid for their time, all of these people have simply earned ordinary income in the place they gave their time, akin to personal services. No nuanced characterization of an intangible asset or location of an unknown geographical source is required. Reframing social media transactions

⁹ Herbert A. Simon, *Designing Organizations for an Information-Rich World*, in *COMPUTERS, COMMUNICATIONS, AND THE PUBLIC INTEREST* 40 (1971).

¹⁰ See *infra* Part II.

¹¹ See *infra* Part II.

¹² See *infra* Part II.

¹³ See *infra* Part I.

¹⁴ See *infra* Part II.

as a sale of attention rather than data not only simplifies the analysis, but it addresses critiques of digital services taxes enacted by a number of foreign jurisdictions.¹⁵

Third, the Article proposes a Pigouvian tax on platforms to account for the negative externalities that social media imposes. A Pigouvian tax aims to tax businesses in an amount equal to the costs they impose on third parties in order to force the business to internalize those costs.¹⁶ A classic example of such costs would be pollution caused by a business's factory, which harms the local residents. An ideal Pigouvian tax would force the factory to internalize the cost imposed on the local residents by charging a tax equal to the amount of harm caused by the pollution.¹⁷ Similarly, a Pigouvian tax on the sale of attention would aim to force social media platforms to internalize the harms caused by excess social media use. Importantly, the Pigouvian tax proposed here could be calculated per minute or hour of *time* spent on the social media platform, given that the core harm addressed by the tax stems from monetization of the user's attention. In this respect, the proposal differs from prior proposals to tax digital platforms based on the amount of *data* transferred.

This Article proceeds as follows. Part I surveys current tax literature on the sale of consumer data to digital platforms, discusses recent reform proposals to tax data, and describes the challenges arising from characterizing the sale of digital data for tax purposes. Part II explores the attention economy, with a focus on the economics of social media platforms and how they monetize consumer attention. Part III explores the tax implications of the attention economy and describes a concrete policy proposal for taxing social media platforms on the monetization of consumer attention. It also describes how reframing social media transactions as a sale of attention supports the justification for digital services taxes enacted by many foreign jurisdictions and proposed by several U.S. commentators. Part IV concludes.

I. THE INFORMATION AGE AND THE CURRENT TAX SYSTEM

With the rise of the internet and other computer technology, we have entered an era that is often described as the “Digital Age” or the “Information Age.”¹⁸ A defining feature of this shift is that technology has made information readily available at all times. Scholars across many disciplines have chronicled how the Information Age has seen a rise in the volume of and exchange of data.¹⁹ As tax scholar Adam Thimmesch observed, “The modern Internet ecosystem is largely built on the collection, analysis, and monetization of consumer data.”²⁰

The idea that consumer data is valuable is not new. Long before the internet, it would have been valuable for a business to acquire the customer list of a competitor so that it could proactively target those people for its own business. But digitization has made all facets of using data – tracking

¹⁵ See *infra* Part III.D.

¹⁶ See *infra* Part III.C.

¹⁷ *Id.*

¹⁸ See, e.g., Shoshana Zuboff, *Big Other: Surveillance Capitalism and the Prospects of an Information Civilization*, 30 J. INFO. TECH. 75, 77 (2015) (describing the current era as an “information civilization”); Hayes, *supra* note 1, at 156.

¹⁹ Hayes, *supra* note 1, at 156. Hayes defines data as a “certain type of information—that which is generated or encoded by humans.” *Id.*

²⁰ Adam Thimmesch, *Transacting in Data: Tax, Privacy, and the New Economy*, 94 DEN. L. REV. 145, 146 (2016).

it, storing it, and sharing it—exponentially cheaper, faster, and easier.²¹ The rise of so-called “big data” has launched an entire industry of online companies that profit from consumer data, as evidenced by the massive earnings of companies like Google, Facebook, and Amazon.²² Some of this data is provided directly by consumers in the form of demographic information, such as supplying their age, gender, and birthday when they sign up for a digital product.²³ Other data flows from companies’ use of technology to track decisions people make, for example, what videos they watch and or products they purchase.²⁴ Both of these types of data can, in turn, be aggregated with data from other consumers to generate predictions about future behavior.²⁵

Digital companies that profit from data often employ what’s called a “multi-sided platform,” with two main sets of customers.²⁶ One group of customers are individual consumers, who are granted “free” access to the product, such as when an individual conducts a Google search for free or scrolls uses a Facebook account for free.²⁷ The other set of customers are advertisers, who pay the platform for access to the customers.²⁸ Selling targeted ads is a massive source of revenue for the digital platforms. In 2023, Google generated over \$230 billion of revenue from advertisements, representing over 75 percent of its total revenue, with other products like paid subscription services generating a much smaller share of revenue.²⁹

Most of our current legal system, including our tax laws, was developed before the internet age. As digital companies like Facebook and Google have come to dominate the marketplace, and multisided business models have become a centerpiece of the economy, scholars and policymakers have had to reckon with how to adapt existing legal regimes to this evolution. As this Part documents, almost all of the scholarship and reform efforts to respond to digitization have focused on the role that data plays in the economy. As discussed more below, big data does not fit neatly into the current tax system and has, to a certain extent, stymied policymakers who are intent on reform efforts. This Part documents the current scholarship on the role of data in the tax system and highlights the major proposals for reform.

A. Overview of Current Legal and Tax Implications of Big Data

A number of scholars have chronicled the rise of big data and its implications for the legal system.³⁰ For example, commentators have argued that the collection and sale of consumer data

²¹ See, e.g., Amanda Parsons & Salome Viljoen, *Valuing Social Data*, 124 COL. L. REV. 993, 998 (2024).

²² Viktor Mayer-Schonberger & Kenneth Cukier, *BIG DATA: A REVOLUTION THAT WILL TRANSFORM HOW WE LIVE, WORK, AND THINK* 12 (2013).

²³ Thimmesch, *supra* note 20, at 132 (describing “volunteered data” versus “observed data”).

²⁴ Thimmesch, *supra* note 20, at 132.

²⁵ Amanda Parsons & Salome Viljoen, *Valuing Social Data*, 124 COL. L. REV. 993, 997 (2024); Thimmesch, *supra* note 20.

²⁶ Thimmesch, *supra* note 20, at 151.

²⁷ Thimmesch, *supra* note 20, at 151.

²⁸ Thimmesch, *supra* note 20, at 151.

²⁹ *How Does Google Make Money?* <https://www.oberlo.com/statistics/how-does-google-make-money>.

³⁰ See, e.g., Dennis Hirsch, *Predictive Analytics Law and Policy: A New Field Emerges*, 14 I/S: J.L. & POL’Y FOR INFO. SOC’Y 1, 4 (2017) (identifying the four main risks of predictive analytics as privacy, bias, error/due process, and exploitation); Daniel L. Chen, *Judicial Analytics and the Great Transformation of American Law*, 27 A.I. & L. 15 (2019); Stacy-Ann Elvy, *Paying for Privacy and the Personal Data Economy*, 117 Col. L. Rev. 1369 (2017); Erin Bernstein & Theresa J. Lee, *Where the Consumer Is the Commodity: The Difficulty with the Current Definition of Commercial Speech*, 2013 MICH. ST. L. REV. 39, 82 (2013).

raises important privacy concerns.³¹ Others have argued that data extraction exploits people without compensation. In her influential book, *The Age of Surveillance Capitalism*, Shoshana Zuboff describes how technology companies like Google and Facebook revolutionized the commodification of data extracted from internet users, creating massive wealth for themselves in the process, a phenomenon she calls “surveillance capitalism.”³² Zuboff chronicles how Google evolved from selling data about user searches to advertisers to aggressively hunting and procuring user data through surveillance.³³ She describes this extraction of user data as a pattern of “subordination and hierarchy” by technology companies, and concludes that “surveillance capitalism must be reckoned as a profoundly antidemocratic social force.”³⁴

In the tax law literature, there are two main strands of scholarship addressing the prominence of consumer data in the economy. One body of work identifies the exchange of consumer data for purportedly “free” use of digital products as a taxable barter exchange under current U.S. tax law, even though such transactions are generally not reported as such.³⁵ The other line of work identifies the challenges with taxing transactions related to consumer data due to its intangible nature, which makes it hard to value and source to a particular jurisdiction.³⁶ The two strands of literature are not mutually exclusive in their focus, although the latter tends to focus on international tax issues, including which jurisdictions have authority to tax multinational corporations on the extraction and sale of users’ data. Both approaches focus on “data” as the primary commodity being bought and sold in the digital age.³⁷

1. Data Transactions as a Taxable Barter Exchange: U.S. Tax Consequences

Several tax law scholars have identified the exchange of a consumer’s data for purportedly “free” use of a digital platform (like Facebook) as a taxable barter transaction under U.S. tax law principles.³⁸ This is consistent with clearly established tax law, which generally treats arm’s length exchanges as taxable even if no cash payment is involved.

The Internal Revenue Code (“Code”) taxes “all income from whatever source derived,” including non-cash sources of income.³⁹ Treasury Regulations also clarify that gross income “includes income realized in any form, whether in money, property, or services.”⁴⁰ To take a standard example familiar to tax law students, if a painter offers painting services to a lawyer in

³¹ Jay A. Soled & Kathleen DeLaney Thomas, *Predictive Analytics and the Tax Code*, 51 FL. ST. UNIV. L. REV. 597, 623 (2024).

³² Shoshanna Zuboff, *THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER* 8 (2019).

³³ *Id.* at 93-94.

³⁴ *Id.* at 94 & 513.

³⁵ See Thimmesch, *supra* note 20; Hillel Nadler, *Taxing Zero*, 26 FL. TAX. REV. 253 (2023); Young Ran (Christine) Kim & Darien Shanske, *State Digital Service Taxes: A Good and Permissible Idea (Despite What You May Have Heard)*, 98 NOTRE DAME L. REV. 741 (2022); Reuven S. Avi-Yonah & Nir Fishbien, *The Digital Consumption Tax* (2020), available at <https://repository.law.umich.edu/articles/2746>.

³⁶ See Omri Marian, *Taxing Data*, 47 BYU L. REV. 511 (2022); Reuven S. Avi-Yonah, Young Ran (Christine) Kim & Karen Sam, *A New Framework for Digital Taxation*, 63 HARV. INT. L. J. 279 (2022); Parsons & Viljoen, *supra* note 21; Yariv Brauner, *Taxation of Information and the Data Revolution*, 109 IOWA L. REV. 1959 (2024).

³⁷ See, e.g., Marian, *supra* note 36, at 516.

³⁸ See *supra* note 35.

³⁹ I.R.C. § 61.

⁴⁰ Treas. Reg. § 1.61-1(a).

exchange for legal services through a barter club, both the painter and the lawyer have taxable income equal to the fair market value of the services received.⁴¹ The barter transaction is an in-kind one – meaning no money was exchanged – but it is a taxable exchange of value nonetheless.⁴²

Scholars have correctly observed that, when a Facebook user accesses the platform without paying fee, a similar in-kind exchange takes place between the user and the platform.⁴³ Facebook offers something of value (use of its platform) to the user, and the user offers something of value to Facebook – be it data (as suggested in the literature) or attention.⁴⁴ This, in turn, means the user has received taxable income under U.S. tax principles equal to the fair market value of the platform services it receives.⁴⁵ Similarly, Facebook (or other digital platform) has received income from the user, although such income may be offset by a corresponding business deduction representing the cost of the services it provides.⁴⁶

It is indisputable that platforms are providing value to the user in the barter exchange, because access to digital platforms could also be provided via a subscription fee. When users access a platform like Facebook or TikTok, they have free access to entertainment, informational content, and connections with online friends. This is a valuable service that one could put a price on. From the user’s perspective, the barter characterization means the value of all of their free social media use throughout the year should technically be treated as taxable income. Scholars acknowledge, however, that this would be both administratively difficult and politically infeasible.⁴⁷ Note, this is true regardless of whether the barter is characterized as an exchange of the user’s data or an exchange of the user’s attention. In either case, the user has received something of value (free use of the platform), but collecting a tax from every user of a digital platform is likely unrealistic.⁴⁸

The harder question is how to characterize the value being provided by the user in the barter exchange. In the classic lawyer-painter barter example, the tax law tells us to value each side’s services at whatever they would be worth on the open market.⁴⁹ But what is the social media user providing to the platform? The literature almost unanimously describes it as the user’s provision

⁴¹ Rev. Rul. 79-24; 1979-1 C.B. 60.

⁴² *See id.*

⁴³ *See supra* note 35.

⁴⁴ Thimmesch, *supra* note 20, at 163.

⁴⁵ Thimmesch, *supra* note 20, at 163; Nadler, *supra* note 35, at 255-56.

⁴⁶ Nadler, *supra* note 35, at 255-56; Thimmesch, *supra* note 20, at 169. Thimmesch observes that when digital platforms purchase consumer data through the provisions of free use of the platform, they should both report income from that sale and take a cost basis in the data purchased. *Id.* Avi-Yonah and Fishbien characterize the barter exchange as equivalent to a “monthly subscription payment for the access to Facebook” and a “monthly royalty-like fee that Facebook is paying to the Users for the right to collect data on them...” The two deemed payments exactly offset one another. Avi-Yonah & Fishbien, *supra* note 35, at 4.

⁴⁷ Thimmesch, *supra* note 20; at 173-74; Nadler, *supra* note 35, at 292-293.

⁴⁸ Nadler, *supra* note 35, at 292-293 (discussing a direct tax on consumers that could be supplemented with third-party reporting via the platforms, but arguing valuation would make such tax difficult); Thimmesch, *s supra* note 20, at 178-80 (arguing a tax on “individuals’ personal-data gains” would be inefficient and would disproportionately impact low income taxpayers.); Brauner, *supra* note 36, at 1967 (arguing “it would be impossible to tax” the barter transaction).

⁴⁹ *See* Rev. Rul. 79-24; 1979-1 C.B. 60 (“The fair market value of the services received by the lawyer and the housepainter are includible in their gross incomes under section 61 of the Code.”).

of their personal data.⁵⁰ The problem, however, is that data – i.e., information – is virtually unlimited and worth very little, at least on an individual basis. This makes assigning value to the platform for purposes of income tax difficult. The characterization of what the platform has received from the user in the barter exchange also matters for determining the *source* of the income. In other words, for cross-border transactions, determining which country has the authority to tax the income depends, in part, on what the consideration in the transaction is.⁵¹ The questions of how to value and source customer data will be discussed further in the next subpart. Part III will argue that characterizing the exchange as a purchase of *attention* makes the value and source questions easier to resolve.⁵²

2. Data as an Intangible Asset in a Global Tax System

The tax law has long struggled with the taxation of intangible assets, such as intellectual property or financial products. Because it is hard to identify the location of something intangible, businesses can claim such assets are located offshore in a favorable jurisdiction, thereby attempting to avoid tax by the United States or their home jurisdiction.⁵³ Intangible assets are also hard to value, which can similarly lead to avoidance strategies to produce favorable tax results.⁵⁴ Policymakers across the globe have worked for years to address these and other challenges as globalization and digitization have only furthered opportunities for companies to claim their assets

⁵⁰ See sources cited at *supra* note 35. However, Nadler describes the exchange as “access to their users’ data or attention.” *Supra* note 35, at 257.

⁵¹ International tax rules generally allow for taxation based on residence in the jurisdiction, or if the “source” of the income arises in the jurisdiction. See, e.g., Brauner, *supra* note 36, at 1987 (explaining the role of source in assigning jurisdiction to tax in a global tax regime).

⁵² In lieu of imposing an income tax, scholars have suggested that users should be subject to consumption taxes when they “pay” for the use of digital platforms by providing their personal data. Avi-Yonah & Fishbien, *supra* note 35, at 5. Under this theory, users are deemed to have paid a “subscription fee” when they provide their data to the platform. Under this subscription fee construct, states in the United States would impose a sales tax (and countries with a VAT would impose the tax) on platform users in the same way consumers are charged sales tax (or VAT) on many retail sales or services. *Id.*

⁵³ See, e.g., Marian, *supra* note 36, at 540-42.

⁵⁴ *Id.* at 541.

reside offshore.⁵⁵ The rise of big data, scholars have argued, has made the issue exponentially worse.⁵⁶

As scholars have argued, “data is sourced nowhere, owned by no one, and is devoid of value.”⁵⁷ At the same time, digital platform companies like Facebook operate all over the globe, with subsidiaries in multiple jurisdictions. The ability of these companies to claim that intangible assets like data are located in a tax-favorable jurisdictions, along with the ability to easily manipulate the value of hard-to-value assets, facilitates global tax avoidance. This is a problem that has long vexed taxing authorities around the world.⁵⁸

a. Valuing Data

Two aspects of data make it particularly hard to value for tax purposes, even relative to other intangible assets. First, data on each individual user, and different pieces of data about a particular user, are virtually worthless on their own.⁵⁹ Companies are able to monetize data when it is packaged with data on many other users. When vast quantities of data are combined, machine learning programs allow digital platforms to make predictions about consumer behavior, which is valuable for advertisers.⁶⁰ But characterizing the transaction between an individual user and a digital platform as an exchange of data for platform services is somewhat dissatisfying: the user has clearly received something of value (free use of the digital platform), but the individual data extracted from the user on the exchange is worth almost nothing. Some scholars have suggested

⁵⁵ See, e.g., Brauner, *supra* note 36, at 1965 (“The entire post-BEPS work justifies taxation without physical presence with the construct that in the digital economy users (the consumers of digital goods or services) actively participate in the generation of income and by that provide the hook for their (the users’) states of residence to tax the digital giants.”). A thorough discussion of the opportunities for avoidance and evasion in the digital economy is beyond the scope of this article. For a succinct overview of international tax rules as they relate to multi-sided business models, see Congressional Research Service, *Digital Services Taxes (DSTs): Policy and Economic Analysis* CRS R45532 (Feb. 25, 2019). It is worth noting that the G20 and the Organization for Economic Cooperation (OECD), a multi-country group, has been working on a “Base Erosion and Profit Shifting” (“BEPS”) initiative for over a decade with the aim of taking a coordinated approach to reducing opportunities for multinational companies to avoid tax. See OECD, *Base Erosion and Profit Shifting (BEPS)*, <https://www.oecd.org/en/topics/policy-issues/base-erosion-and-profit-shifting-beps.html> (last visited June 1, 2025). Much of this initiative is aimed at addressing tax challenges presented by digitization (including how to tax multi-national companies that use the two-sided business model), such as adopting a rule that would give countries where internet users are located jurisdiction to tax a portion of the multi-national company’s profits. See OECD, *Pillar One Amount A Fact Sheet 2*, <https://www.oecd.org/content/dam/oecd/en/topics/policy-issues/cross-border-and-international-tax/pillar-one-amount-a-fact-sheet.pdf>. For an overview of the evolution of the BEPs project, including a second version (BEPS 2.0), see Avi-Yonah, Kim & Sam, *supra* note 36, at 286-297.

⁵⁶ See Marian, *supra* note 36 at 531 (“These challenges are all exacerbated by the rise of the data economy, which effectively combines these challenges at scale. The data economy not only makes source, ownership, and value difficult to identify—it makes them theoretically meaningless for income tax design.”); Brauner, *supra* note 36, at 1976 (“These ownership questions are not new, but the data revolution and probably the ascent of the data giants have brought them to the forefront of the public debate.”).

⁵⁷ See Marian, *supra* note 36, at 545.

⁵⁸ See *supra* note 55; see also Brauner, *supra* note 36, at 1965.

⁵⁹ See Marian, *supra* note 36, at 546.

⁶⁰ Amanda Parsons and Salome Viljoen define this as the “prediction value” of data, which they argue is key to understanding how to regulate transactions in the digital economy. See Parsons & Viljoen, *supra* note 21, at 1013.

that the transfer of nearly valueless information may not even satisfy the realization requirement to trigger income taxation.⁶¹

Another aspect of data that makes it so hard to value is that ownership of information about a person can be *shared*, but it cannot be *transferred* from one party to the other in any meaningful way. When a digital platform learns our age and gender, nothing has changed for us from an economic perspective, and this is true no matter how many times that information is packaged and shared.⁶² As discussed above, data is infinitely scalable. The lack of scarcity points towards data having little to no value.⁶³ Relatedly, the lack of property law protections for individual data further support its lack of value.⁶⁴

b. Where is Data Located?

Equally challenging is the issue of how to source the transfer of data in an international tax regime. Scholars have suggested that, just as it is virtually impossible to value data, our current legal constructs do not allow for a meaningful way to assign a geographical source to data.⁶⁵ If the collection of data from a single user has no value, then it is hard to argue that the source of the transaction (for tax purposes) is the location of the user.⁶⁶ If data does not have value until it is bundled with other user data, another location should be relevant for finding the source of the transaction, but even that location isn't clear. For example, is it where a server that stores the data is located? Is it where the data is processed?

International tax law scholars have observed that, under the current global tax regime, the digital platform companies have essentially “won” the debate over source by locating their assets in tax-favorable jurisdictions and claiming that location governs tax treatment.⁶⁷ Sourcing the sale of customer data under traditional rules applied to personal property would potentially assign source to the residence of the seller (i.e., the internet user), but these rules are hard to apply when individuals don't have property rights in their data and, to date, this is not the approach international tax regimes have taken.⁶⁸ Another approach would be to treat the sale of customer data like sales of remote services, which implicates two possible locations—the residence of the customer and the residence of the service provider.⁶⁹ However, under current application of international tax rules, only the latter approach is taken, meaning source is assigned to the location of the service provider (the digital platform in this case).⁷⁰

In sum, a multitude of scholars, policymakers, and interest groups have argued that the current international regime, which was created before the advent of modern technology, fails to

⁶¹ See Brauner, *supra* note 36, at 1970.

⁶² See Marian, *supra* note 36, at 546-47. This aspect of information can be contrasted with other types of intangible property, like copyright, which gives owners exclusive rights. See Brauner, *supra* note 36, at 1974.

⁶³ Brauner, *supra* note 36, at 1980.

⁶⁴ Brauner, *supra* note 36, at 1977.

⁶⁵ See Marian, *supra* note 36, at 547-48; Brauner, *supra* note 36, at 1986-91.

⁶⁶ See Marian, *supra* note 36, at 547.

⁶⁷ See Brauner, *supra* note 36, at 1991.

⁶⁸ See Brauner, *supra* note 36, at 1988.

⁶⁹ See Brauner, *supra* note 36, at 1990-91.

⁷⁰ See Brauner, *supra* note 36, at 1991.

adequately account for the digital economy.⁷¹ That regime taxes multinational companies in countries where they have a physical presence (like an office or factory), but platform companies that operate online are largely able to avoid establishing a meaningful physical presence in many high tax jurisdictions.⁷² These companies can create subsidiaries in tax havens and shift profits from intangible assets like data to those jurisdictions, effectively avoiding corporate taxes in higher tax jurisdictions where their customers are located.⁷³

B. Evaluating the Current Tax Law Response

Taxing the sale of internet user data presents numerous legal and administrative hurdles. Imposing U.S. income tax consequences on internet users for the value they receive from digital platforms is impracticable. International tax rules also make it challenging to assign meaningful tax burdens to multinational companies on the purchase and monetization of customer data. In response to these challenges, experts have set forth several proposals for how to best tax the sale of customer data, including digital service taxes (DSTs) and data taxes.⁷⁴ These approaches have been thoroughly explored in the literature, and this subpart offers just a brief overview of the benefits each approach and where each approach falls short.

It is important to note that taxes like a DST or data taxes are meant to operate within the current international tax framework and, in many respects, are meant to make up for the shortfalls of the international tax regime.⁷⁵ Alongside proposals for these taxes are years of efforts by policymakers to reform the global tax system.⁷⁶ Such reform efforts seek to change the way profits of multinational firms are taxed to account for digitization of the economy and, importantly, would allow profits of those companies to be allocated among jurisdictions where internet users are located for tax purposes.⁷⁷ A full exploration of these reform efforts is beyond the scope of this Article, which assumes the current international tax regime will continue to apply in the near future. Regardless, international tax reform does not alter the core arguments of this Article that are explored below in Part III, and the tax on attention explored in that Part could complement any international tax reform.

⁷¹ See sources cited at note 36, *supra*.

⁷² See Avi-Yonah, Kim & Sam, *supra* note 36, at 280.

⁷³ See Avi-Yonah, Kim & Sam, *supra* note 36, at 280.

⁷⁴ Amanda Parsons suggests a “toolkit” approach that could include data taxes but may also include changes to wealth and capital income taxation to account for transfers of social data. See Amanda Parsons, *Tax Law for information Capitalism* (draft on file with author). Additionally, both Marian and Brauner discuss a “formulary apportionment” approach, which would allocate global net profits of multi-national companies across multiple jurisdictions for income tax purposes according to a formula. See Marian, *supra* note 36, at 557; Brauner, *supra* note 36, at 2012-13.

⁷⁵ DSTs are theoretically intended to be a temporary measure in the lead up to more significant international reform, with countries ideally repealing them if the OECD agreement was implemented. See Marian, *supra* note 36, at 556.

⁷⁶ See *supra* note 55.

⁷⁷ See, e.g., Avi-Yonah, Kim & Sam, *supra* note 36, at 280 (“To solve the problem of market country taxation in the global, digitalized world, Pillar One [of the OECD BEPS project] modifies existing profit allocation and nexus rules. Pillar One allocates part of a multinational’s residual profits to market jurisdictions even if the multinational has no physical presence in those market countries.”).

1. Digital Service Taxes (DSTs)

A number of foreign countries, including France and the United Kingdom, have enacted Digital Service Taxes (DSTs) in recent years, which allow them to impose tax on digital platforms that are accessed by the country's residents.⁷⁸ A DST is a low-rate tax on gross revenues from digital services provided to that country's users.⁷⁹ Because the tax is on gross revenue and not net profit, DSTs function as consumption taxes rather than income taxes.⁸⁰ (Consider, for example, that a sales tax is imposed on the gross sales price of a transaction, rather than on the seller's net profit.) And because they are technically not income taxes, DSTs generally avoid the sourcing and profit allocation issues created by the international income tax regime.⁸¹

DSTs are generally imposed on gross revenue from a company's "digital services" in the jurisdiction regardless of whether they are offered to users for free (like Facebook) or for payment (like Amazon).⁸² The "digital services" generally include showing ads targeted to users in the jurisdiction and extracting data from users in the jurisdiction.⁸³ The gross revenue subject to tax generally comes from the sale of advertising.⁸⁴ Commentators have also advocated for such taxes on the state level in the United States.⁸⁵

DSTs have an obvious advantage in that they allow countries to collect tax from platform companies without confronting the jurisdictional issues associated with income taxes. However, commentators have noted a number of drawbacks to these taxes. First, because they tax gross revenue of digital platforms, the taxes might apply even when a company does not operate at a profit for the taxable year.⁸⁶ Relatedly, commentators have argued that DSTs operate as a consumption tax at an intermediate point in the supply chain that would not normally be subject to tax.⁸⁷ Generally, under a consumption tax regime (like a sales tax), only the final retail stage is subject to tax; the intermediate stages of production are all exempt to ensure the tax is collected only once.⁸⁸ The DST, commentators argue, collects tax in the middle of the supply chain on

⁷⁸ See Avi-Yonah, Kim & Sam, *supra* note 36, at 282.

⁷⁹ Young Ran (Christine) Kim, *Digital Services Tax: A Cross-Border Variation of the Consumption Tax Debate*, 72 ALA. L. REV. 131, 136 & 161 (2020). DSTs range from about 2% to 7.5% and only imposed on businesses above a certain earnings threshold. *Id.* at 161.

⁸⁰ See Kim, *supra* note 79, at 136.

⁸¹ See Kim, *supra* note 79, at 136.

⁸² See Avi-Yonah, Kim & Sam, *supra* note 36, at 282.

⁸³ See Kim, *supra* note 79, at 146.

⁸⁴ See Kim, *supra* note 79, at 152 (summarizing various European DSTs).

⁸⁵ See Young Ran (Christine) Kim & Darien Shanske, *State Digital Services Taxes: A Good and Permissible Idea (Despite What You May Have Heard)*, 98 NOTRE DAME L. REV. 741 (2022); Robert D. Plattner, *The Virtues of a Simple Excise Tax on Personal Consumer Data*, 106 TAX NOTES STATE 955 (2022) (advocating for New York's proposed personal consumer data excise tax); Andrew Appleby, *Subnational Digital Services Taxation*, 81 MD. L. REV. 1 (2022). Maryland legislators enacted such a tax, although it is currently being challenged in the courts by digital businesses for (among other issues) violating the Internet Tax Freedom Act, a federal law that prohibits states from enacting taxes that discriminate against online businesses. See Andrea Muse, *Judge Strikes Down Maryland Digital Ad Tax*, 106 TAX NOTES STATE 311 (2022); Andrea Muse, *Maryland Digital Ad Tax Cases Up for Discovery, Evidentiary Hearings*, 115 TAX NOTES STATE 129 (2025).

⁸⁶ See Kim, *supra* note 79, at 161. Some DSTs provide exemptions for companies operating at a loss. *Id.*

⁸⁷ See Congressional Research Service, *supra* note 55, at 9 ("DSTs are economically equivalent to excise taxes on intermediate services in the supply chains of various markets.").

⁸⁸ See Karl A. Frieden & Douglas L. Lindholm, *State Digital Service Taxes: A Bad Idea Under Any Theory*, TAX NOTES SPECIAL REPORTS (April 10, 2023).

transactions that will be later subject to tax, resulting in a “pyramiding” effect that would cause the same value to be taxed multiple times.⁸⁹ Such pyramiding is thought to distort business decisions and increase effective tax rates.⁹⁰

There are several other prominent arguments against DSTs. Some have argued that DSTs present the same obstacles as income taxes; they still require valuing the transfer of data and locating a destination of a virtual sale, both of which are essentially meaningless in the digital economy.⁹¹ Opponents have also argued that foreign DSTs are discriminatory against U.S. tech companies (like Facebook and Google).⁹² Finally, commentators have observed that DSTs may inappropriately “ring fence” (i.e., segregate and treat differently) certain digital business models from the rest of the digital economy.⁹³

2. Data Taxes

Recognizing the challenges with valuing and sourcing sale of user data, some scholars and policymakers have proposed a tax on data to address these issues.⁹⁴ One such proposal, by Omri Marian, would tax the *volume* of data, rather than its value (thereby obviating the need to value the exchange with users).⁹⁵ The tax would thus be a certain dollar amount per gigabyte of data collected.⁹⁶ To avoid having to source the data to a particular location, Marian proposes a “data-flow” tax that would tax the user of the data on both uploads and downloads of data.⁹⁷ Although both internet users and digital platforms transfer data in these ways (for example, a Facebook user might upload a video to the platform), Marian suggests that the entire tax could be imposed on the “data collectors” (i.e., the platforms).⁹⁸ Other scholars have similarly advocated for data excise taxes based on the volume of data collected.⁹⁹

Legislators in New York State have also proposed (but not enacted) another version of a data tax, a so-called “Data Mining” tax, which would use the number of internet users as the tax base rather than the volume of data collected.¹⁰⁰ In other words, the tax would be calculated as a fixed amount per consumer rather than having to track the volume (or value) of data collected.¹⁰¹ The relevant consumers would be fulltime residents of New York.¹⁰²

⁸⁹ Frieden & Lindholm, *supra* note 88.

⁹⁰ Cristina Enache, *Digital Taxation Around the World*, TAX FOUNDATION 18 (April 2024), available at <https://taxfoundation.org/wp-content/uploads/2024/04/FF833.pdf>.

⁹¹ Marian, *supra* note 36, at 556.

⁹² See Kim, *supra* note 79, at 164.

⁹³ See Kim, *supra* note 79, at 164 & 181.

⁹⁴ See Marian, *supra* note 36, at 560.

⁹⁵ See Marian, *supra* note 36, at 561.

⁹⁶ Marian, *supra* note 36, at 561.

⁹⁷ Marian, *supra* note 36, at 561-62.

⁹⁸ Marian, *supra* note 36, at 573-74.

⁹⁹ Avi-Yonah, Kim & Sam, *supra* note 36, at 338 (proposing a data excise tax that would be measured in gigabytes but, unlike Marian’s proposal, would only tax downloaded (i.e., collected) data, making uploads irrelevant).

¹⁰⁰ Plattner, *supra* note 85, at 956.

¹⁰¹ Plattner, *supra* note 85, at 956.

¹⁰² Plattner, *supra* note 85, at 961.

Data taxes not only avoid having to value individual transfers of data, but they could be relatively simple to administer. For example, a data tax equal to \$1 per gigabyte would simply require a platform company to pay the tax on all data collected from IP addresses in the jurisdiction or transferred to IP addresses in the jurisdiction.¹⁰³ But these proposals are not without their drawbacks. Critics of New York’s proposal for a data mining tax have noted that having to determine New York residency would create record-keeping burdens and potentially result in double counting some residents.¹⁰⁴ Opponents have also argued that it is inappropriate to tax supply chain inputs (i.e., the pyramiding argument discussed above) and that some companies may simply refuse to do business in the state.¹⁰⁵ While data taxes based on volume of data collected avoid the issue of having to establish residency of users, critics have argued that using IP addresses to source the tax still provides opportunities for manipulation.¹⁰⁶ Scholars have also noted there are administrative hurdles to imposing an entirely new tax regime and that data taxes may present the same ring-fencing issues that DSTs do.¹⁰⁷

To be clear, data taxes like those proposed by legislators and academics are a creative solution to an important problem, and one worth exploring. But the biggest drawback to these taxes appears to be the least discussed in the literature: whether measuring data by volume or number of users is a good proxy for the value exchanged when platforms monetize their user base. The idea of finding a proxy for value when data is so hard to value makes sense. Gigabytes can be easily measured. But it is not clear that the size of data transferred, or the number of internet users, are good proxies.¹⁰⁸ An internet company might have a multitude of users from which it collects data but might engage in very little targeted advertising. Similarly, the size of data flows does not necessarily correlate with platforms’ ability to monetize data. Digital videos, for example, are much larger in size (measured in megabytes) than photos, so a platform engaged in video sharing will likely involve much larger volumes of data uploaded and downloaded than one involving photos. But is not clear the former platform has extracted more taxable value from users or can earn more revenue from advertisers by virtue of the format of the content.

II. THE ATTENTION ECONOMY

In recent years, some commentators have argued that the world is shifting towards an “attention economy,”¹⁰⁹ where the most valuable resource is human attention rather than goods or services. This is related to, but distinct, from the vast expansion of information made available by the internet and other advances in technology. Information is an unlimited resource, but our attention is not. This Part explores why the primary asset being extracted from digital platforms is best seen as attention, not data.

¹⁰³ Marian, *supra* note 36, at 574 (describing a hypothetical example with Google and New York).

¹⁰⁴ Avi-Yonah, Kim & Sam, *supra* note 36, at 336 (summarizing arguments against New York’s data mining tax).

¹⁰⁵ Avi-Yonah, Kim & Sam, *supra* note 36, at 336.

¹⁰⁶ Avi-Yonah, Kim & Sam, *supra* note 36, at 339. However, Marian argues this point doesn’t matter: “The owner of the IP address from which data is sent or received is the taxpayer. If a VPN is used, it will be the VPN service provider who pays the tax.” Marian, *supra* note 36, at 566.

¹⁰⁷ See Parsons, *supra* note 74, at 53-54.

¹⁰⁸ Cf. Parsons, *supra* note 74, at 54 (arguing that using gigabytes or consumers as proxies might not be the best way to measure taxpayers’ ability to pay).

¹⁰⁹ Michael Goldhaber, *The Attention Economy & The Net*, FIRST MONDAY, <https://firstmonday.org/ojs/index.php/fm/article/view/519>.

A. The Most Valuable Resource is Attention, not Information

The limitless supply of data made possible by digitization has fundamentally altered how we interact with the world around us. But focusing on the rise of data in reshaping the modern economy misses an important feature of information: it is not scarce and, therefore, it is cheap.¹¹⁰ Rather than information, the key resource driving a shift in the modern economy is attention. Attention, unlike information, is finite. Companies compete for our attention, making it a valuable and scarce resource.

This insight was first observed by Nobel-Prize-winning economist Herbert Simon in a 1971 address entitled, “Designing Organizations for an Information-Rich World.”¹¹¹ In what turned out to be a highly prescient speech for a panel related to computers and technology, Simon laid out the relationship between information and attention using an analogy to rabbits: whether the world is overpopulated with rabbits depends on whether there is enough food for the rabbits to eat. A “rabbit-rich” world is “lettuce poor,” and a lettuce-rich world is rabbit poor.¹¹² In other words, Simon observed, abundance of one thing leads to scarcity of the other, which leads to competition for the scarce resource.¹¹³ In the context of information, Simon’s description of an “information-rich” world foreshadowed how technology would make information increasingly abundant. Applying his scarcity principle to this abundance, Simon observed that “a wealth of information creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it.”¹¹⁴

The intuition is simple but profound. Just as there is only so much lettuce to allocate to rabbits, humans have a finite amount of attention to allocate to a deluge of information. In his *Principles of Psychology*, William James describes attention as “withdrawal from some things in order to deal with others.”¹¹⁵ Biologically, we can only focus our attention on a limited number of things at any given time.¹¹⁶ This is an easily observable phenomenon: anyone who has stopped a work or school-related task in the middle to attend to a notification on their phone or computer has experienced competition for their attention. The key challenge in an information-rich world, Simon concluded, is how to “conserve and effectively allocate” the scarce resource of attention.¹¹⁷

Over twenty-five years later, a theoretical physicist named Michael Goldhaber revitalized Simon’s theory in yet another speech that proved to be before its time.¹¹⁸ In a presentation titled “The Attention Economy and the Net” (at a 1997 conference on the Economics of Digital

¹¹⁰ Hayes, *supra* note 1, at 28.

¹¹¹ Simon, *supra* note 4, at 40.

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ Simon, *supra* note 4, at 40-41.

¹¹⁵ William James, *PRINCIPLES OF PSYCHOLOGY* 404 (1890).

¹¹⁶ Maxi Heitmayer, *The Second Wave of Attention Economics: Attention as a Universal Symbolic Currency on Social Media and Beyond*, 37 *INTERACTING WITH COMPUTERS* 18, 19 (2025).

¹¹⁷ Simon, *supra* note 4, at 41.

¹¹⁸ In 2021, the New York Times described Goldhaber as “the internet prophet you’ve never heard of.” Charlie Warzel, *I Talked to the Cassandra of the Internet Age*, *NEW YORK TIMES* (Feb. 4, 2021) (“Here’s a short list of things he saw coming: the complete dominance of the internet, increased shamelessness in politics, terrorists co-opting social media, the rise of reality television, personal websites, oversharing, personal essay, fandoms and online influencer culture — along with the near destruction of our ability to focus.”).

Information), Goldhaber argued that we are at experiencing a fundamental shift towards an “attention economy.”¹¹⁹ Relying on Simon’s concept of attention as a scarce and valuable resource, Goldhaber made several crucial points regarding the role of attention in the economy.

First, Goldhaber observed that focusing on “information” as the centerpiece of the modern economy is misguided. Economies revolve around competition for scarce resources, and information is abundant and freely shareable with anyone.¹²⁰ Attention, Goldhaber argued, is the scarce resource that is central to the economy in the information age.¹²¹ This point is intuitive: if we all had access to unlimited amounts of cash, it would no longer hold value in the economy. The same goes for any other resource like food or energy.

Second, while he concedes attention has always been a valuable resource, Goldhaber posited that attention wasn’t always primary. Consider, for example, that print publications have long made money by selling print ads—effectively selling our attention to the advertiser in exchange for a free or cheap publication. However, for many years (from the Industrial Revolution forward), the economy revolved around the exchange of money for services and/or the production of material goods. The modern economy, Goldhaber argued, increasingly devalues material goods and increasingly involves economic exchanges involving attention.¹²² Indeed, as the internet and social media in particular have proliferated, we increasingly engage in exchanges of our attention with the outside world, and these exchanges take up an increasingly larger portion of our time.

Third, Goldhaber observed that “money flows along with attention.”¹²³ Those who command a lot of attention have access to money, but money cannot necessarily buy attention. This observation, made decades before the rise of social media, was also prescient. Consider how social media influencers can rise to fame and fortune with access to little or no resources, merely by attracting enough followers.

Simon and Goldhaber were able to crystalize a seemingly obvious insight: that attention is scarce and is therefore a more important resource than information in the modern economy. Remarkably, their two iconic speeches were delivered well before companies like Alphabet (owner of YouTube and Google) and Meta (owner of Facebook and Instagram) came to dominate the market for attention.

The distinction between information and attention is more than semantic. It has critical implications for both the economics of the digital age and also for legal institutions, such as the tax system. Yet for most of the nearly three decades since Goldhaber’s lecture (and over fifty years since Simon’s), these observations have largely flown under the radar. Legal scholarship, including tax law scholarship, has focused almost exclusively on the role of information and/or data in the modern economy and the law. By way of illustration, a Westlaw search for law journal articles with “Information Age” in the title yields 228 results.¹²⁴ The same search with “Digital Age” yields

¹¹⁹ Goldhaber, *supra* note 109.

¹²⁰ Goldhaber, *supra* note 109.

¹²¹ *Id.*

¹²² Goldhaber, *supra* note 109.

¹²³ Goldhaber, *supra* note 109.

¹²⁴ Westlaw search for “TI(‘Information Age’)” conducted May 16, 2025.

608 results. “Digital Economy” yields 48 results, and “Information Economy” yields 19 results. On the other hand, “Attention Economy” yields just two results.¹²⁵ (Searches for “Attention Age” or “Attention Era” yield no results).

B. How Social Media Platforms Consume and Monetize Our Attention

Predictions that attention would become a primary commodity in the modern economy have proven stunningly accurate with the rise of social media platforms like TikTok and Facebook. To understand the role that social media platforms have played in reshaping the economy, it is instructive to first consider how attention markets functioned before the digital age.

1. Evolution of the Market for Attention

In his book, *The Attention Merchants*, legal scholar Tim Wu describes how the founding of the *New York Sun* in 1833 marked a turning point in the market for human attention.¹²⁶ Benjamin Day, the *Sun*’s founder, decided that to compete with more established newspapers, he would price his new publication at only one cent per copy.¹²⁷ But unlike how traditional print sources were priced, this modest fee would not cover the cost of production of the paper.¹²⁸ The key insight Day had was that, rather than making money to cover his costs from the purchasers of the paper, he would make money from selling advertisements.¹²⁹ In other words, Day’s profit would come not from the sale of the paper itself, but from the sale of his customers’ attention to the advertisers. Day further departed from traditional media business models by focusing on salacious stories to attract readers, without regard to newsworthiness and sometimes without regard to truth.¹³⁰ The strategy proved wildly successful, and many other businesses soon caught on and followed suit. As Professor Wu observes: “By demonstrating that a business could be founded on the resale of human attention, Benjamin Day and his competitors became the first attention merchants worthy of the title. Over the next two centuries, Day’s model would spawn generations of imitators, from radio networks and broadcast television to Google and Facebook.”¹³¹

The two-sided business model used by social media platforms like Facebook is the modern day of equivalent of the *New York Sun*. Just as the *Sun* was offered at a close-to-nominal price, platform users have access social media platforms for free. The profit comes not from the sale of the platform to its users, but from the sale of the users’ attention to advertisers. In one respect, the

¹²⁵ See Tim Wu, *Blindspot: The Attention Economy and the Law*, 82 ANTITRUST L.J. 771 (2019); Kyle W. Cunningham, *Litigation in the Attention Economy: Developing Defenses to Social Media Addiction Claims*, FEDERAL LAWYER (December 2022). Notwithstanding the dearth of legal scholarship exploring the implications of an attention economy, there is a growing body of economics and social science literature on attention. See, e.g., David S. Evans, *The Economics of Attention Markets*, [], Erik Brynjolfsson, Seon Take Kim & Joo hee Oh, *The Attention Economy: Measuring the Value of Free Goods on the Internet*, 35 INFO. SYS. RES. 978 (2023); Georg Frank, *The Economy of Attention*, J. SOC. 6 (2018); Maxi Heitmayer, *The Second Wave of Attention Economics: Attention as a Universal Symbolic Currency on Social Media and Beyond*, 37 INT. W. COMP. 18 (2025).

¹²⁶ Tim Wu, *THE ATTENTION MERCHANTS* 11-18 (2016).

¹²⁷ *Id.* at 12.

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.* at 12-13, 17-18 (describing Day’s plan “to feature stories from which no one could look away” and the printing of a “fake news” story about life on the moon that was wildly popular).

¹³¹ *Id.* at 18.

social media business model is just a continuation of the evolution of the sale of attention over the past two decades. As observed by Professor Wu, the *Sun*'s model was adopted by radio stations, magazines, and television. As media has evolved, businesses have continued to find ways to compete for and monetize attention. But the rise of digital platforms represents a significant shift in attention markets, in both kind and degree.

First, technology has lowered the barrier to entry into the attention market. It has always been the case that people can profit from attention. A well-known movie star or a television personality can command a high salary for a project because the creators know that they will draw a large audience. But historically, selling attention wasn't widely accessible to the public, because the average person generally did not have any means to access the attention of people not within their immediate physical or social circle. Relatedly, the average person did not have access to an advertiser's dollars.

Today, internet platforms connect us instantaneously with people all over the world. Anyone can create social media content for free, and anyone able to gain enough attention can monetize that attention. A person who creates videos on TikTok or Instagram might secure a paid brand ambassador opportunity simply by acquiring enough followers or "likes." Further, platforms like Twitch are premised entirely on a model of individual users selling attention to other users. Twitch is a live streaming platform, on which individuals create live video content for users to watch and sometimes interact with through comments or similar features.¹³² The streamers post live video feed of anything from playing video games (a popular streaming activity)¹³³ to something as mundane as eating a sandwich.¹³⁴ Viewers can generally watch livestreams for free, but may pay extra for subscriptions that get them access to premium content, or by making "donations" directly to streamers.¹³⁵ The streamers generate income from the platform based on the amount of followers and audience engagement they can accumulate; some of the most successful streamers make millions of dollars a year.¹³⁶ As trite as it may seem, the idea that a platform like Twitch has figured out how to monetize performance of a daily household task by one individual is revolutionary. It is hard to overstate the importance of this shift in access to attention markets.

Second, consider how much easier it is in the digital age for businesses to track and monetize the attention of consumers. In a 19th century newspaper, or a 20th century television show, an advertiser would pay to promote their product with the hope of attracting attention, but with very little assurance they were actually purchasing the attention of their desired audience.¹³⁷ It is easy to turn the page on a print ad or leave the room during the commercial break of one's favorite

¹³² See, e.g., Nathan J. Jackson & Mark R. Johnson, *Frictions and Flows in Twitch's Platform Economy: Viewer Spending, Platform Features and User Behaviours*, INFORMATION, COMMUNICATION & SOC. 3 (May 2024) (describing how Twitch works). Twitch, which is owned by Amazon, leads the market in streaming platforms with millions of streamers and over 100 million viewers. *Id.* at 2 & 4.

¹³³ *Id.* (describing how a stream can be any activity from playing video games, "visiting a restaurant," "working on an art or craft," or just talking to viewers).

¹³⁴ See, e.g., <https://www.twitch.tv/davyiseatingasandwich> (last visited May 19, 2025).

¹³⁵ *Id.* at 3 -4.

¹³⁶ *Id.* at 3 (explaining that, in order to monetize their content, streamers have to obtain "Affiliate" status by demonstrating and maintaining a certain audience size; they can get "further benefits" by becoming Twitch "Partners").

¹³⁷ See Hayes, *supra* note 1, at 125.

show. In the modern era, advertisers have access to troves of data to help them target the right audience and track whether users are viewing their ad (such as through “clicks”). Although some of these measures are still crude proxies for how much active attention is being paid to a particular ad (consider that one could mindlessly click a video but pay little actual attention to its content), the ability to home in on discrete increments of an individual user’s time has allowed attention to be packaged and commodified in an unprecedented way.¹³⁸

In his book *The Siren’s Call: How Attention Became the World’s Most Endangered Resource*, journalist Chris Hayes documents how the commodification of attention into “tiny silvers of time [that can be] sold off at auction” represents a fundamental shift in the economy that resembles the commodification of labor.¹³⁹ Humans’ capacity to work existed long before labor markets, yet the demand for mass labor brought about by industrialization turned human labor into a commodity that could be priced and sold. This commodification of human labor, in turn, necessitated new “legal, technological, and institutional regimes” according to Hayes.¹⁴⁰ Without new legal structures (for example, modern labor law protections like minimum wage), mass labor markets have shown the tendency to drive down the price of individual labor, with potentially dehumanizing consequences.¹⁴¹

The commodification of human attention, Hayes argues, represents a similarly pivotal shift with implications for law and other social institutions.¹⁴² The demand for attention has grown with the rise of digital technologies, but so has the supply. Specifically, smartphones have allowed companies to have access to our attention during virtually any waking moment. The fact that we take our phones with us everywhere we go, and those phones send us constant notifications, means that significantly more of our attention can be captured than ever before.¹⁴³ Further, in addition to being able to capture more moments of our day, social media platforms have figured out how to maintain our attention in subtle and sometimes involuntary ways that far exceed the scope of traditional ads prior to the digital age. These mechanisms are discussed more in the next subpart. The increase in supply of attention that is captured through applications on digital devices (particularly phones) makes our attention cheaper, which again has a potentially dehumanizing effect.¹⁴⁴

2. How Social Media Platforms Monetize Attention

Part I described the standard “multi-sided” business model of social media platforms, in which the platform is offered for free to customers and revenues are derived from selling targeting ads. As discussed in that subpart, the purportedly “free” use of the platform by the consumer is most often characterized in the legal literature as an in-kind exchange of the customer’s personal data (both demographic data and their behavior) for use of the platform. While it is true that digital platforms compile and profit from consumer data, the primary value in the exchange between the

¹³⁸ See Hayes, *supra* note 1, at 129.

¹³⁹ Hayes, *supra* note 1, at 129-131 (citing Zoe Sherman and Karl Polanyi for the concept of a “fictitious commodity”—something priced like a commodity but that is not the product of a market).

¹⁴⁰ *Id.* at 130.

¹⁴¹ *Id.* at 135-36.

¹⁴² *Id.* at 131.

¹⁴³ *Id.* at 133.

¹⁴⁴ *Id.* at 136.

platform and the consumer is the consumer's attention. As previously established, information is abundant and cheap. Much of our personal information (like demographic information and personal interests) is out in cyberspace and has been bought and resold countless times.¹⁴⁵ What advertisers want to pay for is attention. Platforms derive revenue from this attention, which is reflected in their pricing structures.

When it comes to how they generate revenue, not all digital platforms operate in the same way. Some digital platforms, like Netflix, are subscription-based.¹⁴⁶ Other digital platforms, like Amazon, combine subscription fees, online sales, and ad revenue.¹⁴⁷ This Article focuses exclusively on social media platforms like Facebook, TikTok, and Instagram. Social media platforms have been defined by scholars as having three distinguishing features: (1) the platform employs the multi-sided business model (free use by customers and revenue from advertisers); (2) most content is created by users who interact with one another on the platform; and (3) the platform uses algorithms to curate content for each user.¹⁴⁸ Netflix and Amazon do not fall in this category because there is no social component where users post content and interact with each other.¹⁴⁹ Similarly, email services or message boards allow users to interact with each other but lack the two-sided business model of social media platforms.¹⁵⁰ This Article's analysis is limited to social media platforms because, as will be argued below, they employ a specific set of tactics to mine user attention and cause a specific set of harms that merit a policy response.

The social media apps that have generated the most revenue in recent years are Facebook, Instagram, YouTube, and TikTok.¹⁵¹ All employ a similar revenue-generation model based on user "engagement"—which essentially means attention.

Consider Facebook, which generated over \$93 billion in revenue in 2024.¹⁵² Facebook is a social networking platform that users can join for free to virtually connect with friends and family who are also on the platform.¹⁵³ Users typically share photos on their Facebook profile and can post life updates, which are shared on the user's timeline with their network of Facebook "friends."¹⁵⁴ A key feature of the platform is the "feed": when visiting the site, users see an endless stream of posts, some from their friends and some not, which are chosen by Facebook's

¹⁴⁵ See, e.g., Emily Stewart, *Companies Lose Your Data and then Nothing Happens*, VOX (Apr. 21, 2022), <https://www.vox.com/the-goods/23031858/data-breach-data-loss-personal-consequences>.

¹⁴⁶ Netflix, *What is Netflix?* <https://help.netflix.com/en/node/412> (last visited May 20, 2025).

¹⁴⁷ *Inside Amazon's \$575B Treasury: How AWS Outpaces Retail in Profits*, <https://www.highradius.com/finsider/amazon-revenue-breakdown/> (last visited May 20, 2025).

¹⁴⁸ See Guy Aridor et al., *The Economics of Social Media*, CESIFO WORKING PAPER 10934 at 2 (2024), <https://cepr.org/voxeu/columns/economics-social-media>.

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ David Curry, *Social App Report 2025*, BUSINESS OF APPS (Apr. 2025), https://www.businessofapps.com/data/social-app-report/?utm_source=social&utm_medium=click&utm_campaign=featured-data-ad (showing Facebook earned \$93 billion of revenue in 2024, Instagram earned \$66 billion, YouTube earned \$36 billion, and TikTok earned \$23 billion). Facebook and Instagram are both owned by Meta, YouTube is owned by Alphabet Inc. (which also owns Google), and TikTok is owned by the Chinese company ByteDance. *Id.*

¹⁵² *Id.*

¹⁵³ See Sean Michael Kerner, *What is Facebook?* TECHTARGET (last visited May 20, 2025), <https://www.techtargget.com/whatis/definition/Facebook>.

¹⁵⁴ *Id.*

algorithm.¹⁵⁵ Users can interact with posts in their feed by clicking a “like” button and/or by commenting on a post, as well as by sharing the post with others in the user’s network.¹⁵⁶

The vast majority of revenue from Meta’s platforms (both Facebook and Instagram) comes from selling ad space.¹⁵⁷ The ads are sold through an auction system, with the price based on whether a user sees an ad in their feed or engages directly with the ad.¹⁵⁸ Specifically ads are priced either “per click” (how many times a user clicks on an ad) or by “impressions,” which indicates how many times an ad appeared in a user’s feed as they scrolled through.¹⁵⁹ Although there is a bidding process to ad auctions that resembles a traditional auction, the auction component of the Facebook ad structure is better understood as Facebook’s use of an algorithm to place ads.¹⁶⁰ Specifically, anytime there is an opportunity to show a user an ad, Facebook conducts an auction to determine which ad to show that particular user.¹⁶¹ The auction factors in the advertiser’s bid, an estimate of whether the user will engage with the ad (by clicking on it and/or buying the product), and the quality of the ad (based on user feedback such as hiding the ad or viewing the ad).¹⁶²

The auction process – which again is best understood as a targeting process using an algorithm—relies on data Facebook compiles from its users.¹⁶³ The key metric in the data is engagement: the ad is more likely to be chosen based on the likelihood of engagement.¹⁶⁴ Then the advertiser is charged for the ad according to how often the viewer sees or clicks on the ad. This is fundamentally different than how ads were priced before the digital age, where no metric existed to track whether a customer actually looked at a page in a magazine or a newspaper.

Notably, advertisers do not pay Facebook for a list of customers that would be the best targets for an ad, which looks much more like a sale of data. The advertisers pay for a user to see the ad in their feed (i.e., impressions) or to actively engage with the ad (by clicking on it); if those things don’t happen, there is no payment. The essence of this transaction is a purchase of the user’s attention. The information fueling the algorithm is crucial to the purchase of attention, but the information is not the product. Similarly, a set of paints and a canvas would be crucial to the production of a painting. But a purchaser who goes to an art gallery and buys a painting has purchased a work of art, not a set of paints and canvas.

¹⁵⁵ See Meta Transparency Center, *Facebook Feed AI System* (Mar. 12, 2025), <https://transparency.meta.com/features/explaining-ranking/fb-feed/?referrer=1>.

¹⁵⁶ See Kerner, *supra* note 153.

¹⁵⁷ See Meta, Investor Relations, Fourth Quarter Earnings Release for 2024 at 9, https://s21.q4cdn.com/399680738/files/doc_financials/2024/q4/Meta-12-31-2024-Exhibit-99-1-Final.pdf, (showing 97.6% of 2024 revenue coming from advertising).

¹⁵⁸ Meta, Business Help Center, *How Meta Charges for Ads*, <https://www.facebook.com/business/help/716180208457684?id=1792465934137726> (last visited May 21, 2025).

¹⁵⁹ Meta, Business Help Center, *Impressions*, <https://www.facebook.com/business/help/675615482516035> (last visited May 21, 2025) (“Impressions measure how often your ads were on screen for your target audience.”)

¹⁶⁰ Meta, Business Help Center, *About Ad Auctions*, <https://www.facebook.com/business/help/430291176997542?id=561906377587030> (last visited May 21, 2025).

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ See *id.*

¹⁶⁴ See *id.*

Facebook’s revenue model is not unique; the other major social media platforms use a similar process and charge advertisers per click or impression.¹⁶⁵ It bears repeating again that customer attention – not data – is the primary driver of these social media platform revenues. The customer data is undoubtedly an important component of the transactions. Crucially, data helps advertisers make predictions about where to place their ads. But the revenue comes from the actual engagement metrics, which are designed to be indicia of attention. If the social media platform cannot demonstrate that a user engaged with or at least viewed an ad in their feed, they do not get paid for the ad.

Analogously, consider an employer who solicits a resume from a prospective employee. The employer likely considers the resume to be crucial screening information, but the employer’s objective is not to acquire a resume; it wants to acquire an employee. Similarly, the core resource over which advertisers compete is not information about how to get our attention; it is our attention itself. This distinction matters because it has shaped the tactics used by platforms to maintain our attention, many of which are harmful, as discussed in the next subpart. Shifting the focus from data to attention also requires a reimagining of the taxation of digital platforms, discussed in Part III below.

3. How Social Media Platforms Maintain our Attention

The fact that social media companies sell users’ attention to advertisers has important implications for their business models. Simply put: to maximize revenue, social media platforms must maximize the time that users spend on the platform. Scholars and journalists have documented a number of design features of social media platforms that keep users’ attention, including endless feeds, algorithmic content section, social feedback (e.g., “likes”), and notifications.

The most important feature – and one that is a defining feature of the major platforms like Facebook, Instagram, YouTube, and TikTok – is the endless “feed.” When they use the app, users are presented with an endless supply of content (e.g., videos or photos) that they can scroll through; the videos/photos change as the user scrolls, but the supply is infinite.¹⁶⁶ The endless feed creates a feeling of “flow” for the user, which allows the user to become immersed and prevents any natural stopping point.¹⁶⁷ Experts have observed: “It is well known that flow goes along with a feeling of time distortion and this is exactly what many developers of social media apps...aim to achieve—a person being so immersed that he or she is forgetting about time and space while using a platform or app.”¹⁶⁸ Further, just as slot machines keep people playing by offering occasional

¹⁶⁵ See YouTube, *Advertising*, https://www.youtube.com/intl/en_ae/ads/how-it-works/set-up-a-campaign/budget/ (last visited May 21, 2025); *How Much Do TikTok Ads Cost: Understanding the Budget for Advertising on TikTok*, MAGIC BRIEF (Aug. 9, 2024), <https://magicbrief.com/post/how-much-do-tiktok-ads-cost-understanding-the-budget-for-advertising-on-tiktok#:~:text=The%20average%20cost%20per%20thousand,with%20other%20social%20media%20ads.>

¹⁶⁶ Christian Montag et al., *Addictive Features of Social Media/Messenger Platforms and Freemium Games against the Background of Psychological and Economic Theories*, 16 INT. J. ENVIRON. RES. PUBLIC HEALTH __, 4 (2019).

¹⁶⁷ *Id.* at 5.

¹⁶⁸ *Id.* at 4.

rewards, a social media feed periodically offering an amusing, interesting, or otherwise rewarding video in the feed also conditions users to keep scrolling.¹⁶⁹

A second but related feature designed to keep users on the platform is the use of machine-learning algorithms to select which videos or posts are delivered to a user's feed.¹⁷⁰ In 2021, the New York Times reported on a leaked internal document from TikTok explaining how its algorithm works.¹⁷¹ TikTok is a video sharing app, on which users can post their own content, and on which they are shown an endless feed of videos curated by the app.¹⁷² The internal document describes the company's ultimate goals as optimizing for two metrics: "retention" (i.e., users continuing to come back to the app) and "time spent" on the app by users.¹⁷³ In other words, to optimize profits, the company seeks to keep users on the app as often as possible for as long as possible. To do that, the document explains, TikTok uses an algorithm to predict which videos will best keep users' attention.¹⁷⁴

The TikTok algorithm assigns a score to user-created videos based on certain metrics, and then videos with the highest scores are displayed in users' feeds.¹⁷⁵ The internal document explains that the algorithmic prediction is based on "likes," "comments," and "playtime."¹⁷⁶ In other words, videos that have earned the most attention – demonstrated by engagement metrics like playtime and likes– receive the highest score and are more likely to be included in user feeds. The idea is intuitive. TikTok wants to keep people engaged with the app as much as possible, so they show videos that have been played, liked, and/or commented on by many other people. However, it is worth noting that the app optimizes for attention and only attention, possibly at the expense of other possible goals like truthfulness, newsworthiness, harm reduction, or even topics of interest. For example, viewers might see salacious or even violent content because it tends to attract more engagement. Critics have argued this model of maximizing time spent on the app aims to addict users and can, in some cases, result in harmful outcomes (discussed more in the next subpart).¹⁷⁷

Social media platforms are also designed for users to receive social feedback from their fellow users in the form of "likes" or comments.¹⁷⁸ For example, under each Facebook post, a "Like" button allows users to select an emoji response to a post, including a thumbs up or a heart.¹⁷⁹ Users also have the option of clicking "comment" and writing a text comment that will be displayed

¹⁶⁹ *Id.* at 5. See also Hayes, *supra* note 1, at 51& 53.

¹⁷⁰ Montag et al., *supra* note 166, at 6.

¹⁷¹ Ben Smith, *How TikTok Reads Your Mind*, NEW YORK TIMES (Dec. 5, 2021).

¹⁷² *Id.*

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ *Id.*

¹⁷⁶ The algorithm also includes "an indication that the video has been played." *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ Montag et al., *supra* note 166, at 6.

¹⁷⁹ See Lauren Scissors et al., *What's in a Like? Attitudes and Behaviors around Receiving a Like on Facebook* at 1501-03, (2016), https://scontent-iad3-2.xx.fbcdn.net/v/t39.8562-6/240855116_191207939741435_1768810464421671520_n.pdf?_nc_cat=100&ccb=1-7&_nc_sid=e280be&_nc_ohc=JuBuvfS93dgQ7kNvwEMBMlp&_nc_oc=Admadv9EyBT1ut92PwILwFobf4LTB0tiTd7Eb5WN_iuSVdChiJKPFLISHVcF0YW6z68&_nc_zt=14&_nc_ht=scontent-iad3-2.xx&_nc_gid=bV48bSJsyh-S47mVAfKmMw&oh=00_AfLB7npcU8Vn0rgsrA2pZp4WYvDUuUMR4HQb3Oum2TBgwQ&oe=683528DB (describing Facebook's social feedback mechanisms).

underneath the post. The post displays the cumulative number of such “likes” and comments, with more popular posts racking up more likes and comments. The other major social media platforms have similar features.¹⁸⁰ Positive feedback on social media operates as a social reward, which researchers can observe through positive changes in brain activity.¹⁸¹ In other words, receiving positive feedback on one’s posts is psychologically rewarding, which incentivizes users to keep returning to the app to check on feedback and to keep posting in the future. Researchers also note that these feedback mechanisms embedded in the apps promote social pressure and social comparison: users want to accumulate as much (or more) positive social feedback than their peers, and they fear missing out if they are not engaging in the app.¹⁸² All of these features drive more social media use.

Finally, social media apps use notifications to attract users’ attention when they are not active on the platform. These notifications are most often associated with smartphones; if you have an app on your phone, the app will send notifications with activity updates such as new likes or comments on your post.¹⁸³ These notifications might be dings, vibrations, visual notifications on the phone’s lock screen, or some combination of these.¹⁸⁴ Most importantly for the social media companies, the notifications are designed to interrupt the user if attention is focused elsewhere and refocus attention on the app. Because users tend to associate these notifications with social rewards, they tend to be very effective at redirecting attention to the app. And then once on the app, the aforementioned features like the endless feed are designed to get users to stay (perhaps longer than intended).

C. Costs and Benefits of the Modern Attention Economy

Over 5 billion people use social media, representing about 60 percent of the world’s population and over 95 percent of internet users.¹⁸⁵ The average time spent on social media platforms per day is about 2.5 hours, more time than spent on any other leisure activity.¹⁸⁶ Scholars have documented several benefits of social media: the free use of social media platforms provides a significant consumer surplus, users may be more informed about the world, politics and current events, and the platforms allow users to develop and maintain social connections.¹⁸⁷ Users may also benefit

¹⁸⁰ *Id.* at 1501.

¹⁸¹ Montag et al., *supra* note 166, at 7, citing Sherman et al., *Peer Influence via Instagram: Effects on Brain and Behavior in Adolescence and Young Adulthood*, 89 CHILD DEV. 37 (2018) (using MRI to measure brain activity of subjects viewing Instagram posts).

¹⁸² Montag et al., *supra* note 166, at 5-7.

¹⁸³ Amy Blaschka, *This is Why You Need to Turn Off Social Media Notifications*, FORBES (Sept. 21, 2020).

¹⁸⁴ *Id.* App notifications can be shut off by adjusting smartphone settings. *Id.*

¹⁸⁵ Simon Kemp, *Digital 2024: Global Overview Report*, <https://datareportal.com/reports/digital-2024-global-overview-report>. Most Americans report having used social media, with over 80 percent having used YouTube and nearly 70 percent having used TikTok. See Pew, *Americans’ Social Media Use*, <https://www.pewresearch.org/internet/2024/01/31/americans-social-media-use/> (82 percent for YouTube, 68 percent for Facebook.).

¹⁸⁶ Aridor et al., *supra* note 148, at 1.

¹⁸⁷ See Aridor et al., *supra* note 148, at 1 (describing consumer surplus, being informed about the world, and maintaining connections as positives); Brynjolfsson et al., *supra* note 125, at 978 (“We estimate the increase in consumer surplus created by free internet goods was more than \$25 billion per year in the United States between 2002 and 2011.”); Hunt Allcott et al., *The Welfare Effects of Social Media*, 110 Am Econ. Rev. 629, 629-30 (2020) (“At a basic level, social media dramatically reduce the cost of connecting, communicating, and sharing information

from leveraging social media platforms for business promotion and networking.¹⁸⁸ Finally, some research indicates that positive receiving feedback on social media (such as “likes”) can improve happiness and self-esteem on a short-term basis.¹⁸⁹

Notwithstanding the aforementioned benefits, considerably more research documents the harms associated with social media use.¹⁹⁰ First, despite some research indicating that social media likes (and similar feedback) can improve short-term happiness and self-esteem, many scholars have observed a negative correlation between social media use and overall mental health.¹⁹¹ Relatedly, scholars have noted that depression rates have risen over the same period that social media and smart phone use has expanded, and that there is a particularly pronounced correlation among adolescents between depression and social media use.¹⁹²

In terms of why social media would negatively impact mental health, some studies suggest that time spent on social media often takes the place of face-to-face social interactions, resulting in increased isolation and feelings of loneliness.¹⁹³ Further, design features like the endless feed tend to make users unaware of how much time they spend on social media apps, and when coupled with algorithmic content selection and positive feedback, may lead to addiction.¹⁹⁴ Some scholars have compared the harmful and addictive potential of social media use to gambling, drug use, and tobacco.¹⁹⁵

Other research argues that social media contributes to political polarization, divisiveness, and the spread of misinformation, all of which pose potential threats to democracy.¹⁹⁶ Several aspects of social media design contribute to these effects. In terms of the spread of misinformation, content on social media is not subject to the same fact-checking and editorial process as print media,

with others. Given that interpersonal connections are among the most important drivers of happiness and well-being [citations omitted], this could be expected to bring widespread improvements to individual welfare.”).

¹⁸⁸ Linda C. Ashar, *Social Media Impact: How Social Media Sites Affect Society*, <https://www.apu.apus.edu/area-of-study/business-and-management/resources/how-social-media-sites-affect-society/#:~:text=social%20well%2Dbeing,-,Opportunities%20for%20Professional%20Networking,might%20not%20have%20otherwise%20encountered> (last visited May 27, 2025).

¹⁸⁹ See, e.g., Davide Marengo et al., *Examining the links between active Facebook use, received likes, self-esteem and happiness: A study using objective social media data*, 58 TEL. & INFO. 101523, 7 (2021) (finding that positive feedback on Facebook initially increases self-esteem and happiness, but noting that outside of receiving this direct feedback, Facebook use may have an overall negative effect on self-esteem and happiness).

¹⁹⁰ See, e.g., Allcott et al., *supra* note 187, at 629 ; Montag et al., *supra* note 166, at 2.

¹⁹¹ See, e.g., Allcott et al., *supra* note 187, at 630 (“many have pointed to negative correlations between intensive social media use and both subjective well-being and mental health”).

¹⁹² Allcott et al., *supra* note 187, at 630; Jean M. Twenge et al., *Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates among U.S. Adolescents after 2010 and Links to Increased New Media Screen Time*, 6 CLIN. PSYCH. SCI. 3, 13 (2018) (noting the connection between increased smart phone and social media use, decreased in person interactions, and the rise in mental health issues among teens since 2010).

¹⁹³ Twenge et al., *supra* note 192, at 4.

¹⁹⁴ Montag et al., *supra* note 166, at 9; Florian Sauerwein & Charlotte Spencer-Smith, *Automated Trouble: The Role of Algorithmic Selection in Harms on Social Media Platforms*, 9 MED. & COMM. 222, 223 (2021).

¹⁹⁵ Hunt Allcott, Matthew Gentzkow & Lena Song, *Digital Addiction*, 112 AM. ECON. REV. 2424, 2425 (2022)..

¹⁹⁶ See, e.g., Helena Puig, *Societal Divides as Taxable Negative Externalities of Digital Platforms*, BUILD UP at 7, available at https://www.next-now.org/sites/default/files/2023-03/Societal%20Divides%20as%20a%20taxable%20negative%20externality%20of%20digital%20platforms_0.pdf.

resulting in the proliferation of “fake news” over the last decade.¹⁹⁷ Additionally, content that is provocative (such as hate speech or misinformation campaigns) tends to command more attention; such posts get more likes, shares, and other engagement, which in turn leads the algorithms to show them to more users.¹⁹⁸ Commentators have argued that, because more extreme content generates higher engagement on social media, users are nudged towards increasingly extreme beliefs as they view more and more of such content.¹⁹⁹

Recall that selection algorithms also filter content based on what prior posts that viewer has viewed or engaged with.²⁰⁰ This results in users seeing more content that aligns with their ideological views and more posts from people who align with their views.²⁰¹ The result is a kind of “echo chamber” effect, which shields people from ideological diversity and can lead to group polarization.²⁰² Research has shown that feed algorithms like that used by Facebook lead to “homophilic clusters,” that is, groups of people with like-minded views who share and receive information is biased towards these views.²⁰³

That people choose to associate with likeminded individuals, or read news that aligns with their beliefs, is not new. However, the current moment is fundamentally different because social media algorithms appear to operate, by design, at a subconscious level.²⁰⁴ The endless feed and curated content may shift people towards ideas or beliefs without that individual realizing it, or without the individual setting out to explore a particular topic online. Users are also constantly barraged with new content at a speed and volume that far exceeds the days of television and print media. And rather than being in an echo chamber of individuals of our own choosing, individuals on social media may find themselves in an echo chamber of content that is selected by an algorithm.²⁰⁵ The ability of the algorithms to attract and maintain attention is simply unprecedented, and the polarization that results has implications for how we function as a democracy. In his book, *#Republic: Divided Democracy in the Age of Social Media*, legal scholar Cass Sunstein warns that this “significant change” brought about by social media will make mutual

¹⁹⁷ See Kathleen DeLaney Thomas & Erin Scharff, *Fake News and the Tax Law*, 80 WASH. & LEE L. REV. 803, 829-31 (2023).

¹⁹⁸ See Christian Staal Bruun Overgaard & Samuel Woolley, *How Social Media Platforms Can Reduce Polarization*, BROOKINGS (Dec. 21, 2022), <https://www.brookings.edu/articles/how-social-media-platforms-can-reduce-polarization/>.

¹⁹⁹ Puig, *supra* note 196, at 8.

²⁰⁰ Puig, *supra* note 196, at 8.

²⁰¹ Puig, *supra* note 196, at 8; Cass R. Sunstein, *#REPUBLIC: DIVIDED DEMOCRACY IN THE AGE OF SOCIAL MEDIA* 76-77 (2017).

²⁰² See Cass R. Sunstein, *#REPUBLIC: DIVIDED DEMOCRACY IN THE AGE OF SOCIAL MEDIA* 68 (2017); *see also* Matteo Cinelli et al., *The Echo Chamber Effect on Social Media*, 118 PNAS 2021, 1, <https://doi.org/10.1073/pnas.2023301118>.

²⁰³ Cinelli et al., *supra* note 202, at 5-6 (finding significantly more segregation and bias on platforms with algorithmic feeds like Facebook and Twitter compared to platforms where users have more control over the feeds, such as Reddit).

²⁰⁴ See, e.g., Kalev Leetaru, *Is Social Media Curating Hate and Scouring the Web for our Greatest Fears?* FORBES (May 13, 2019), <https://www.forbes.com/sites/kalevleetaru/2019/05/13/is-social-media-curating-hate-and-scouring-the-web-for-our-greatest-fears/>.

²⁰⁵ Scholars describe this particular type of echo chamber as a social media “filter bubble.” See, e.g., Ludovic Terren & Rosa Borge, *Echo Chambers on Social Media: A Systematic Review of the Literature*, 9 REV. COMM. RES. 99, 100-101 (2021) (describing social media filter bubbles).

understanding difficult and make it “increasingly hard for people to solve problems that society faces together.”²⁰⁶

In sum, not all aspects of social media are harmful. Many users enjoy the social connectedness they find from engaging in social media platforms. But a growing body of literature documents a number of serious harms from social media use, including negative mental health consequences (particularly among young people) as well as a highly polarized and sometimes misinformed electorate. All of these costs flow from the attention economy model used by social media platforms -- a model that prioritizes the attention paid by users to the platform above all else. Part III will return to these negative consequences in exploring the role of a Pigouvian tax.

III. TAX AND THE ATTENTION ECONOMY

As discussed in Part I, a significant and important body of scholarship and policy work analyzes the rise of the digital economy over the past decade and its implications for legal institutions, including the tax system. To date, academics and other experts have conceptualized the issue as revolving around the transfer and monetization of customer data by digital companies. This Part advocates a shift in the framework from one centered on data to one centered on attention. It then discusses a specific tax policy proposal, along with a discussion of how current reform efforts fit into the attention economy framework.

A. Recharacterizing the Transaction as the Purchase of Attention (not Data)

Digital platforms like Facebook get paid by advertisers for customer attention. Although data collection is a crucial component of the company’s business, the advertisers generally pay for eyes on their ads, not raw data.²⁰⁷ Understanding the exchange between the platform and the customer as an exchange of platform services for attention resolves some of the incongruencies with framing the transfer as a purchase of data. Further, once the transaction is understood as the purchase and sale of customer attention, the tax consequences are simpler to conceptualize.

Recall that, as a starting point, scholars have correctly identified that there is a taxable barter exchange that takes place when an individual uses a social media (or other digital) platform for free.²⁰⁸ What has plagued scholars, particularly tax law scholars, however, is how to characterize the consideration in the exchange.

The tax law starts with the rational assumption that parties acting at arm’s length tend to exchange things of equal value.²⁰⁹ This makes sense. A painter offering up \$1000 of services in a barter exchange for legal services should demand \$1000 of services in return. Similarly, use of a social media platform has value; Facebook incurs billions of dollars of expenses to develop and maintain the app each year, and there is no rational reason the company would offer its services to users gratuitously. But, as discussed above, characterizing the consideration paid by users as data

²⁰⁶ Sunstein, *supra* note 201, at 66-67.

²⁰⁷ See *supra* notes 158-164 and accompanying text.

²⁰⁸ See *supra* Part II.A.1.

²⁰⁹ See *United States v. Davis*, 370 U.S. 65, 72 (1962); *Philadelphia Park Amusement Co. v. United States*, 126 F. Supp. 184, 189 (Ct. Cl. 1954). But for a critique of this presumption, see Robert L. Keller, *The Taxation of Barter Transactions*, 67 MINN. L. REV. 441, 452 n.49 (1982) (arguing that parties can make bad bargains).

or information does not appear to comport with the idea that value exchanged should be equal, because individual user data is either worthless or nearly worthless.²¹⁰

There are additional issues beyond the lopsided nature of an exchange of individual data for platform services. It is also difficult to assign a meaningful legal characterization to customer data for purposes of the exchange. Characterizing customer data as an asset or some form of private property appears inconsistent with the fact that the law doesn't offer property law protections for personal data.²¹¹ A taxable exchange of property also requires a transfer of ownership from the transferor to the transferee—yet individuals have not lost any meaningful ownership in the exchange. Some scholars have similarly noted that customers providing data to platforms is not appropriately characterized as providing services, either.²¹² Like property, providing services implies the provision of something finite. One cannot provide the same “service” an infinite number of times, yet data is virtually limitless, or infinitely scalable.²¹³

On the other hand, as discussed in Part II.B., attention is a finite and scarce resource, making it highly valuable. And unlike individual data, attention does not have to be aggregated with attention from many other users to have quantifiable value. Having an individual user click a link or watch an ad has value for an advertiser. What's more, individual attention has an *opportunity cost*, unlike data. An hour spent on Instagram is an hour not spent doing something else. Such cost can be measured and quantified. For example, some scholars have quantified attention spent on social media by taking an average hourly rate for users' time multiplied by average hours spent on platforms to arrive at an estimate of roughly \$30,000 per person per year.²¹⁴

²¹⁰ See *supra* notes 59-64 and accompanying text.

²¹¹ See *supra* note 64 and accompanying text.

²¹² Brauner, *supra* note 36, at 1979.

²¹³ However, some scholars argue that the transfer of data by platform uses is best understood as labor. See, e.g., See Eric Posner & E. Glen Weyl, *RADICAL MARKETS: UPROOTING CAPITALISM AND DEMOCRACY FOR A JUST SOCIETY* 205-249 (2018); Amanda Parsons, *Tax's Digital Labor Dilemma*, 71 *DUKE L. J.* 1781 (2022). Some transfers of data by users do lend themselves to this characterization, particularly content creation or other forms of “active” participation by users. For example, when a user makes a video and uploads it to TikTok, this could be described as the user performing a service. See *id.* at 1814; see also Eugene K. Kim, *Data as Labor: Retrofitting Labor Law for the Platform Economy*, 23 *Minn. J.L. Sci. & Tech.* 131, 136 (2022). This Article is concerned with passive user activity, that is, the use of a platform by an individual independent of content creation or other service-like activities. In many cases, content creators are able to directly monetize these services. In such instances, the exchange of value is clear because the content creator receives compensation (usually cash, but possibly promotional products). In this respect, the tax consequences are straightforward and there is no need to value or characterize the provision of data. Other content creators who do not monetize their services can be viewed as exchanging their labor for attention – they presumably create the content (e.g., videos) so people will pay attention to it. Although some scholars maintain any provision of data, however passive, should still be characterized as labor, this argument originated from a concern that platform users are exploited and deserve legal protection—not as a way to characterize tax consequences. See Posner & Weyl, *supra*, at 209 (“People’s role as data producers is not fairly used or properly compensated.”). This Article takes the position that passive transfers of data (i.e., merely clicking links, scrolling feed, etc.) should not be equated to labor, at least for tax purposes, particularly since this characterization does not solve the issue of the individual data transfer being worth nearly zero.

²¹⁴ Evans, *supra* note 125, at 21 (using \$13.60 per hour, which is 50% of “before-tax hourly median household income” (the same methodology recommended by the US Department of Transportation to value travel time) and an estimated 514 billion hours “mainly consuming ad-supported content” to arrive at an opportunity cost of \$7.0 trillion in 2019, or \$28,029 per American adult for 2019). Attention could also be quantified by dividing the total amount paid by advertisers for engagement by the number of users engaging with the ads. All the methodologies may differ and produce a range of estimates, it suffices to say that user attention *can* be quantified and the amount is non-zero.

When a platform gathers a user’s age and gender and other demographic information, or tracks their clicks, the user hasn’t transferred ownership of anything and, thus, the exchange is hard (if not impossible) to value for tax purposes. But a user’s attention to a platform is using up finite time the user has in a day and has quantifiable value. This exchange of value—free platform services in exchange for the user’s attention—makes economic sense in the barter framework and is the better way to characterize the transaction.²¹⁵ And as discussed in Part II.C, the pricing models of the major social media platforms support this characterization. Recall that platforms like Facebook, YouTube and Instagram derive the majority of their revenue from advertisers’ paying for user attention, as measured by engagement metrics like clicks and impressions.²¹⁶

How should we characterize attention as a legal and economic matter? It does not appear to be private property, since although it is limited, it is infinitely renewable and cannot be permanently transferred. In other words, a party paying for one’s attention (e.g., an advertiser) does not acquire a property interest in the attention purchased. There is also a human-capital element to attention that resembles labor – it is inextricably linked with our personhood. Yet it is unlike labor in that we are always paying attention to something (during our waking hours), and that something can sometimes represent leisure (like watching a movie).

Some scholars have described attention as a “fictitious commodity,” a term that refers to something priced and traded like a market commodity but that was not created for a market.²¹⁷ The term was coined by economist Karl Polanyi in the 1940s, who identified land and labor as examples of fictitious commodities.²¹⁸ (Both land and the human capacity to do work existed long before they were commodified into something that could be bought and sold.²¹⁹) Attention, scholars argue, has similarly been commodified but is not produced for a market and existed long before such commodification.²²⁰

If property and labor are viewed as opposite ends of a continuum,²²¹ attention might be best characterized as closer to the labor-end of that continuum, while not identical to labor. Both are inextricably linked with being human and cannot be permanently transferred. However, attention can be more passive than labor. Despite their differences, the “fictitious commodities” framework is useful to unify labor and attention, including for tax purposes. Both human labor and human attention exist outside of markets (and therefore outside of the sphere of taxable income). For example, the human “labor” expended to tend one’s own garden is not considered to generate

²¹⁵ However, although attention is fundamentally different than data, important objections raised by scholars regarding the exploitation of individuals by digital platforms in the context of customer data likely apply equally forcefully when the transaction is characterized as attention. *See supra* notes 30-34 and accompanying text; *see also* Posner & Weyl, *supra* note 213, at 239-243 (discussing the potential for a labor movement to address under-compensation of data laborers and “monopolistic power” of technology companies).

²¹⁶ *See supra* notes 158-164 and accompanying text.

²¹⁷ Zoe Sherman, MODERN ADVERTISING AND THE MARKET FOR AUDIENCE ATTENTION 3 (2020).

²¹⁸ Karl Polanyi, THE GREAT TRANSFORMATION 76 (1944).

²¹⁹ *See* Hayes, *supra* note 1, at 130.

²²⁰ *See* Hayes, *supra* note 1, at 130.

²²¹ *See, e.g.,* Imanol Arrieta-Ibarra et al., *Should We Treat Data as Labor? Moving Beyond Free*, 108 AEA Papers and Proceedings 38, 39 (2018) (describing evolving social attitudes about what constitutes “capital” versus “labor,” using slavery as an example).

market income.²²² The same goes for the attention one pays to a reading a novel or in a casual conversation. Yet the economy has evolved to commodify both labor and attention. Once either commodity is priced and sold, the “seller” (that is, the person doing the work or paying attention) has arguably generated market income. And, as discussed further below, the tax law does not distinguish between compensation paid to a person for actively laboring (e.g., mowing someone else’s lawn) or passively paying attention (e.g., attending a focus group) – both would be characterized as compensation for services.

B. Tax Treatment of the Sale of Attention

As much literature has explored, the tax and other legal consequences of extracting data from an individual internet user are murky and complicated. If a platform tracks a person’s clicks and likes, is that a taxable transfer of value from the user? As discussed above, data about the individuals’ movements through a platform or a website aren’t neatly categorized as “labor,” nor are they accurately described as a transferable property interest. On the other hand, compensating a user for paying attention to an ad is a relatively simple transaction for tax purposes. To understand why, it is easier to start with a hypothetical example involving a non-digital business, which can then be analogized to digital platforms.

1. Hypothetical (Non-Digital) Example of Sale of Attention

Assume FaceCorp is a market research company that, among other services, facilitates customer focus groups for advertisers. Further assume that WatchCo., a company that manufactures luxury watches, hires FaceCorp to help it conduct market research.²²³ Under the arrangement, FaceCorp recruits 20 participants to come to its office space on a weekday afternoon and spend 15 minutes watching several video ads created by WatchCo. After watching the ads, the participants are asked to fill out a short survey that simply asks them to check a box indicating whether they would consider purchasing a watch from WatchCo. The customers are compensated for their time with a \$20 Target gift card, supplied by FaceCorp. FaceCorp earns \$1200 from WatchCo. for the focus group.

How are the focus group participants treated for tax purposes when they receive a \$20 Target gift card? The tax treatment of the arrangement is straightforward and clear: they have each received \$20 of taxable income.

As discussed above, the Code defines gross income as “all income from whatever source derived.”²²⁴ Several important principles flow from Code section 61 that are relevant to the focus group participants. First, accessions to wealth of any *form* are taxable unless an exception applies, whether the benefit is cash, property, or services.²²⁵ Second, outside of employment, there is no

²²² Economists consider this imputed income, i.e., non-market income, that is not subject to income tax. See Bankman et al., *FEDERAL INCOME TAXATION* 112 (19th ed. 2023) (describing imputed income).

²²³ For simplicity, assume all parties involved in the hypothetical are located in the United States.

²²⁴ I.R.C. § 61(a). The statute goes on to provide a non-exclusive list of items of gross income, such as compensation for services, interest, rents, royalties, and dividends. *Id.*

²²⁵ The Supreme Court underscored this broad conception of income in *Commissioner v. Glenshaw Glass*, holding that the Code taxes “undeniable accessions to wealth, clearly realized, and over which the taxpayers have complete

“de minimis” exception for income.²²⁶ In other words, there is no amount of income that is too small to be reportable for tax purposes. Finally, although gifts are not considered taxable income, transfers must be motivated by generosity to qualify as gifts for tax purposes.²²⁷

Applying these principles to the Target gift cards in the hypothetical example shows there is clearly a taxable transaction. Receiving a \$20 gift card is an economic benefit that meets the definition of income under Section 61 of the Code. The focus group participants are not employees of FaceCorp., so the limited exclusion for employee de minimis fringe benefits does not apply.²²⁸ Finally, FaceCorp.’s payment of the \$20 gift card was part of its business. It recruited and conducted the focus group in order to earn compensation from WatchCo., and participants were compensated with gift cards for their time. The transaction was not motivated by generosity and would not be considered a gift for tax purposes.

2. Characterizing a Sale of Attention for U.S. Tax Purposes

What kind of taxable income have the focus group participants received? The most straightforward way to describe the transaction is that the participants were compensated for their time. They were paid to show up, watch the ads, and fill out the survey that required checking a box. And, in fact, almost any form of compensation for one’s time will generate taxable income. Being paid by a website to fill out a survey from home generates taxable income. If a producer were to pay people to sit in the audience and watch a play so the theater wouldn’t be empty, the paid audience members would have taxable income. Payments made in exchanges for a person’s time are income because they result in accessions to wealth and are not made gratuitously. And payments for someone’s time that require the person to watch or read something are payments for attention.

Once it is established that payments for time or attention are taxable, the only reason to further characterize the transaction for U.S. income tax purposes is to determine how much tax is due. More specifically, whether taxable income is considered “capital gain” may change the tax rate for the recipient of that income.²²⁹ Capital gains are defined as gains from the sale of a capital asset.²³⁰ Capital assets include a range of personal and investment assets (both tangible and intangible), but for this purposes, it suffices to say that the Code requires a sale of “property” to meet the capital asset requirement.²³¹ The sale of human attention would not qualify. Other than

dominion.” 349 U.S. 925 (1955). Thus, if a taxpayer has received something of value that makes them better off economically and there are no contingencies involved, they are generally subject to tax (unless an exception applies).

²²⁶ For employees, the Code exempts “de minimis fringe” benefits from tax, which are “any property or service the value of which is...so small as to make accounting for it unreasonable or administratively impracticable.” I.R.C. § 132(a)(4), (d).

²²⁷ I.R.C. § 102 (exclusion of gifts from income). In *Commissioner v. Duberstein*, the Supreme Court articulated the test for a gift, which is whether the donor acted with “detached and disinterested generosity.... out of affection, respect, admiration, charity, or like impulses.” 363 U.S. 278, 285 (1960).

²²⁸ Even for an employee, a gift card would not qualify as a de minimis fringe benefits because items that are “cash equivalent” and therefore readily valuable (such as gift certificate) are not excludable from income. Treas. Reg. § 1.132-6(c).

²²⁹ I.R.C. § 1(h) (preferential tax rates on capital gains).

²³⁰ I.R.C. § 1222.

²³¹ I.R.C. § 1221.

capital gains, all other taxable income is generally considered “ordinary” income under the tax law subject to the taxpayer’s marginal tax rates under the Code.²³² Thus, whether payment for one’s time and attention is truly equivalent to labor is irrelevant. In the same way that prizes and other windfalls are taxed at the same rate as wages, so too is the sale of attention taxed at ordinary income rates.

3. Tax Treatment to Purchaser of Attention

Now consider the tax consequences to the purchaser of attention, or FaceCorp in the hypothetical example. Recall that WatchCo. pays FaceCorp \$1200 for market research, and that FaceCorp compensated 20 focus-group participants with \$20 Target gift cards to view ads. In addition to spending \$400 total on the Target gift cards, assume FaceCorp incurs another \$300 in costs allocable to the project (consisting of employee time and use of equipment and office space). The tax consequences to FaceCorp are also straightforward. The \$1200 payment from WatchCo is taxable business income. FaceCorp has also incurred \$700 in business expenses, all of which should be deductible: \$400 for the Target gift cards and \$300 for the other expenses.²³³ FaceCorp’s \$1200 of gross business income would be offset by this \$700 deduction, resulting in \$500 of net income from the transaction.

4. Application of Principles to Digital Platforms

Consider now a purchase of user attention by a social media company. The U.S. tax consequences are the same as the hypothetical, because the format of the transaction (watching ads in a physical office space versus on an electronic device) does not change anything. Unlike characterizing a purchase of customer data, there is no novel legal or economic structure to attempt to fit into pre-existing laws. However, taxing social media users on the sale of their attention does raise valuation and other administrability challenges, discussed below. The international tax consequences of such an exchange also require further exploration of how to characterize “attention.”

a. Tax Consequences are the Same for Digital Platforms

Reconsidering the above hypothetical in the context of a digital platform does not require a new or creative application of U.S. income tax principles. Assume that Facebook has contracted with WatchCo under an arrangement whereby WatchCo will pay \$2 every time a Facebook user clicks on one of its video ads on the platform.²³⁴ Assume 10,000 users click the ad, and WatchCo pays Facebook \$20,000.

²³² I.R.C. § 1(a).

²³³ I.R.C. § 162. Note, while a purchase of data may be characterized as a capitalizable expense, resulting in a cost basis in the purchased asset rather than a current deduction, payments for customer’s attention should be fully deductible in the year of purchase. This is because attention, like labor, is not an asset with useful life beyond the tax year. *See* I.R.C. § 162 (current business deductions) and I.R.C. § 263 (expenses for assets with value beyond the tax year must be capitalized instead of currently deducted).

²³⁴ *See* Mark Irvine, *Facebook Ad Benchmarks for Your Industry*, Wordstream (April 4, 2025), <https://www.wordstream.com/blog/ws/2017/02/28/facebook-advertising-benchmarks> (showing an average cost for click across all industries of \$1.72 and a range of \$0.45 to \$3.77 depending on the industry of the advertiser).

In the brick-and-mortar example above, FaceCorp paid its focus-group participants in kind, with \$20 gift cards. In exchange, the participants gave their attention for a limited amount of time. In this scenario, Facebook has also paid its users in kind for their attention, this time with free platform services instead of gift cards. Like the focus-group participants, the users have been compensated for the attention they paid to the platform and its advertisers.²³⁵ They have taxable income equal to the fair market value of the platform services they receive, in the same way the focus group participants have taxable income equal to the fair market value of the gift card they were given (i.e., \$20).

Facebook has received taxable business income of \$20,000 from WatchCo and, like FaceCorp, has incurred deductible business expenses in earning that income. Because Facebook is generally profitable, its expenses allocable to the transaction are likely less than \$20,000. Based on Meta's reported net profit ratio of around 40 percent,²³⁶ we might estimate that Facebook's net taxable income from the transaction is \$8,000 (40 percent of \$20,000) and that its expenses allocable to the contract with WatchCo are \$12,000.

b. Valuation and Other Administrability Concerns

Although the participants/users have the same tax consequences for the sale of their attention in the brick-and-mortar hypothetical and the social media example, the two scenarios differ in one meaningful respect. In the FaceCorp example, the fair market value of the consideration paid to the focus-group participants -- \$20 Target gift cards -- is easily known. On the other hand, Facebook users have been paid with free use of the platform, and the fair market value of these services is not readily apparent.

It is worth noting that, while the value of the services provided to platform users is not publicly available or easily ascertained, it is *knowable*. This stands in contrast to observations by scholars that a barter exchange of personal data for free use of a platform is impossible to value because the consideration transferred by the user is nearly worthless.²³⁷ The value of a year's worth of free Facebook services should be equal to what Facebook would charge users if it moved to a subscription model (where users did not have to view ads), but the company has never offered paid subscriptions so pricing is not publicly available. In the absence of a public price for the app's services, valuing the transaction is the same as valuing many hard-to-value assets, such as an interest in a closely held business or a work of art.²³⁸ One could use market comparables (such as looking at the subscription costs of similar platforms) to value the benefit to the user.²³⁹ One might

²³⁵ It's true that some Facebook users will never click on ads, yet they will receive free platform services anyway. We can think of this as analogous to a focus-group participant who shows up to FaceCorp's office but falls asleep or zones out during the playing of the ads and doesn't pay attention. Presumably the participant will collect the gift card anyway, and the companies view the value of the group's attention worth the cost. Indeed this is true in many transactions (example, a worker who collects a daily wage but shows up to work and doesn't do anything), and it does not change the overall tax consequences of these transactions.

²³⁶ See Meta, *Fourth Quarter and Full Year 2024 Financial Highlights*, <https://investor.atmeta.com/investor-news/press-release-details/2025/Meta-Reports-Fourth-Quarter-and-Full-Year-2024-Results/> (showing a 42 percent profit margin for 2024).

²³⁷ See *supra* Part II.A.

²³⁸ See Jay A. Soled & Kathleen DeLaney Thomas, *AI, Taxation, and Valuation*, 108 IOWA L. REV. 650, 657-58 (2023).

²³⁹ *Id.* at 658.

also consider Facebook’s costs in providing the service in valuing the benefit to the user, factoring in the company’s profit margin. For example, if the average cost-per-user to Facebook of providing platform services is \$120, and Facebook has an average profit margin of 40 percent, we might estimate the annual value per user to be \$200.²⁴⁰ Finally, one could calculate Facebook’s annual advertising revenue per user, and assume that if the company moved to a purely subscription model, the customers would have to pay an equivalent amount (in order for Facebook’s profit margin to remain the same.) None of these approaches is perfect. However, there is much precedent in the tax law for overcoming valuation challenges when there is not a readily available market for the consideration in a transaction.²⁴¹

Aside from valuation, there is another administrability challenge to taxing users on the sale of their attention. Specifically, the compliance and enforcement costs of taxing a relatively large number of taxpayers on low dollar amounts of income are high in proportion to the tax revenue at stake. This is not unique to digital platforms. In the hypothetical example with FaceCorp, each focus group participant has received only \$20 of income from the gift card. This amount is far below any information reporting thresholds that would require FaceCorp to send the user a Form 1099.²⁴² In the absence of a Form 1099 or another form of third-party information reporting, IRS data shows taxpayers are highly unlikely to report small amounts of income.²⁴³ Many taxpayers may not even realize they have to report the income from the gift card.²⁴⁴ The costs to the IRS of auditing these taxpayers would not justify the small amount of revenue at stake.

There is a similar issue with users of digital platforms. The numbers of users are very high and the revenue at stake may be low. It would be administratively difficult, if not impossible, for the IRS to effectively track platform use in a way to meaningfully require income reporting by users. And no current information reporting law requires platform companies to issue a Form 1099 or similar information return to its users.²⁴⁵ Thus, taxing users directly on the sale of their attention is not viable, as many scholars have observed in the context of analyzing the sale of customer data. This administrability challenge is not unique in the tax law and will be discussed further below in Part III.D.

c. Geographical Source

So far the discussion of tax consequences of the sale of attention has focused on U.S. tax law applied to transactions within the United States. Social media companies like Facebook, however, are multinational, and transactions between the platform and users span the globe. Factoring in international tax law raises one additional factor in conceptualizing the transaction as a sale of attention: the geographic source of the transaction. Specifically, if platform users are

²⁴⁰ \$200 = \$120 of cost + \$80 of profit; and \$80/\$200 = 40%.

²⁴¹ One such approach, surrogate taxation, is discussed below in subpart D.

²⁴² See I.R.C. §§ 6041(a) and 6050W (\$600 reporting threshold for both Form 1099-MISC and 1099-K).

²⁴³ IRS, *Tax Gap Projections for Tax Year 2022* at 16, <https://www.irs.gov/pub/irs-pdf/p5869.pdf> (showing that over half (55%) of income not subject to information reporting is misreported).

²⁴⁴ Leigh Osofsky & Kathleen DeLaney Thomas, *The Surprising Significance of De Minimis Tax Rules*, 78 WASH. & LEE L. REV. 773, 805-806 (2021) (arguing that when taxpayers don’t receive a Form 1099, they may mistakenly believe their income is not taxable).

²⁴⁵ Currently, some digital platforms do have legal obligations to issue Form 1099-K, but these rules apply to “third party settlement organizations,” which generally means platforms like Venmo, PayPal, Uber, and Etsy that accept and/or transfer monetary payments on behalf of or to their users. I.R.C. § 6050W; Treas. Reg. § 1.6050W-1.

located in one country and the platform is based in another country, an application of international tax rules will often require determining the source of the transaction.

For U.S. income tax purposes, characterizing “attention” does not matter because the transaction generates ordinary income whether it is viewed as equivalent to labor, analogous to labor, or as some entirely different transaction. But to determine the source of a transaction for international tax purposes, the transaction generally must be placed in a narrower category. The Code, for example, has specific source rules for interest, dividends, rents and royalties, sales of property, and personal services (among other categories).²⁴⁶ Importantly for this purpose, a sale of property would not necessarily be sourced the same way that personal services would be sourced.²⁴⁷

As discussed above in Part I, the application of international tax law to a sale of data by platform users is uncertain and complex; the correct way to locate an intangible asset like data has been the subject of commentary and debate for the last decade.²⁴⁸ But reframing the transaction as the sale of attention significantly simplifies this analysis. As previously established, human attention is much closer to labor than property. And for tax purposes, selling one’s attention – essentially giving one’s time for money—is indistinguishable from being compensated for services. Once someone is being paid for their time, the tax law does not require an act of “labor” to give rise to ordinary income. If human attention must be put in a source category for international tax purposes, it belongs comfortably in personal services, the only category that relates to monetizing one’s time. U.S. case law interpreting international source rules supports this characterization. Courts have generally held that characterizing a transaction as a sale of property requires a transfer of ownership from seller to buyer, and without an ownership interest in property, a transaction is one for services.²⁴⁹ Under these principles, the sale of user attention would not qualify as a sale of property – even intangible property – and is better characterized as personal service income.

Understanding attention as personal services for international tax law purposes makes sourcing the income of the user straightforward. The default rule is that income from services is generally sourced where the services are performed, and the source of the user’s taxable income would therefore be where users are located.²⁵⁰ Because this Article proposes taxing the platforms rather than the users, this conclusion is of limited relevance for the next two subparts.

Reframing the transaction as a sale of attention has interesting implications for how to tax the platforms, which are beyond the scope of this Article, but are worth mentioning. At the core of the debate over how to tax multinational digital platforms is that countries where users are located generally do not have jurisdiction to tax the platforms when the companies have no physical presence. So far, conceptualizing the transactions with users as a purchase of data has not

²⁴⁶ I.R.C. § 861(a)(1) – (6).

²⁴⁷ I.R.C. §§ 861(a)(3) (personal services) and 865 (sales of property).

²⁴⁸ See *supra* notes 65-73 and accompanying text.

²⁴⁹ See, e.g., *Boulez v. Commissioner*, 83 T.C. 584 (1984) (orchestra conductor earned services income, not royalties, because he had no property interest in the recordings that generated the income); *Commissioner v. Hawaiian Philippine Co.*, 100 F.2d 988 (9th Cir. 1939) (sugar milling contract involved bailment not sale and was therefore considered services income).

²⁵⁰ I.R.C. §§ 861(a)(3), 862(a)(3).

given rise to a cohesive theory for jurisdiction over the platforms, at least under current law. (Hence, stopgap proposals like DSTs). But characterizing the transaction as one for personal services gives rise to a possibility of assigning taxing jurisdiction to the users' home countries. Analogously, Amanda Parsons has argued that conceptualizing the production of data as "labor" would provide a possible basis for users' home countries to have taxing jurisdiction over digital platforms.²⁵¹ The argument is that, in certain cases, having a "workforce" in a foreign jurisdiction might establish enough of a nexus to give that jurisdiction taxing authority over the corporation.²⁵² Parsons argues that the production of content and data by "digital laborers" should constitute such a workforce.²⁵³ Analogously, one could argue that thousands or millions of users selling their attention also establishes a workforce that establishes taxing authority for the users' residence countries. This may be a stretch but is an argument worth exploring in future work.

C. A Pigouvian Tax on Attention

As a starting point in exploring the role of taxation in an attention economy, this Article homes in on the social costs of the monetization of user attention by social media platforms. It does so admittedly at the expense of trying to resolve broader issues over how to allocate taxing authority over platforms among multiple countries. Accordingly, this subpart considers a Pigouvian tax aimed at addressing harms to users caused by social media consumption. The proposal is not meant to supplant reform efforts aimed at redesigning the international tax regime to give more jurisdictions taxing authority over the corporate income of the platform companies. Rather, the proposal below could exist alongside current reform efforts.²⁵⁴ The last subpart argues that reframing social media transactions as a sale of attention also supports the justification for, and responds to critiques of, DSTs.

1. The Design of a Pigouvian Tax on Attention

Named after economist Arthur Pigou, a "Pigouvian tax" aims to tax businesses in an amount equal to the costs they impose on third parties.²⁵⁵ These costs are known as "negative externalities."²⁵⁶ The classic example of a negative externality is pollution from a factory.²⁵⁷ The pollution is a byproduct of the factory's production, but it imposes health and quality-of-life costs on third parties who live near the factory, which the factory does not bear. An ideal Pigouvian tax would force the factory to internalize the cost by charging a tax equal to the amount of harm caused by the pollution. As a result of the tax, the factory might adopt more environmentally-friendly processes or scale back production. Or the factory might continue to pollute and pay the tax, and

²⁵¹ See Parsons, *supra* note 213, at 1831.

²⁵² See Parsons, *supra* note 213, at 1834.

²⁵³ See Parsons, *supra* note 213, at 1834-35.

²⁵⁴ However, understanding user transactions as primarily involving attention instead of data may serve to guide international reform efforts along the lines of that suggested by Parsons.

²⁵⁵ Jonathan S. Masur & Eric A. Posner, *Toward a Pigouvian State*, 164 U. PENN. L. REV. 93, 94-95 (2015).

²⁵⁶ Masur & Posner, *supra* note 255, at 100.

²⁵⁷ See, e.g., Victor Fleischer, *Curb Your Enthusiasm for Pigovian Taxes*, 68 VAND. L. REV. 1673, 1675 (2015) (discussing pollution as the "most common example").

the proceeds could be used to offset harms to the residents impacted by the pollution.²⁵⁸ Simply put, the goal of Pigouvian taxes is to force firms to internalize the cost of negative externalities.

In practice, it is difficult (if not impossible) for governments to exactly calculate the dollar value of the harm caused by a negative externality, and lawmakers often take an approach that combines a rough estimate of costs with political feasibility.²⁵⁹ Thus, taxes labeled as “Pigouvian” (sometimes called “sin taxes”) may be aimed both at deterring socially costly behavior but also serve a revenue-raising function that looks more like an excise tax.²⁶⁰ Familiar examples of these types of taxes include taxes on tobacco, plastic bags, and unhealthy foods or beverages, as well as traffic congestion charges.²⁶¹

Like factories that emit pollution, social media platforms impose negative externalities. As discussed in Part II, platforms like TikTok, YouTube, Instagram, and Facebook are intentionally designed with addictive features such as endless feeds and positive feedback. These features may keep users engaged longer than they intend to, and data shows excess social media use decreases well-being and increases rates of depression, loneliness, addiction, and political polarization.²⁶² All of these social costs are borne by society and not the platforms, the classic case for Pigouvian taxation. Imposing a Pigouvian tax on social media platforms would aim to force the platforms to internalize these harms, which would ideally incentivize them to change their design features. Absent such a change, revenue raised from a Pigouvian tax on social media platforms could be used to address harms created by social media, such as by providing prevention, educational, and/or mental health resources, particularly to young people.

While it could superficially resemble an excise tax like a DST, a Pigouvian tax on social media platforms would differ from current and proposed DSTs in an important way. Because the tax would be aimed at correcting for harms specifically imposed by social media use, the tax would apply only to digital platforms that have specific features closely linked with the negative externalities discussed in Part II. In this respect, a Pigouvian tax on digital platforms would avoid another major critique of DSTs, which is that they are too broad.²⁶³

Recall that Part II.C identified several features unique to social media platforms that specifically aim to capture and hold user attention. Three of these features are endless feeds, algorithmic content section, and social feedback (e.g., “likes”).²⁶⁴ A Pigouvian tax aimed at

²⁵⁸ Ideally, the factory will continue to pollute and pay the tax only if the benefits to the factory exceed its costs, including the costs imposed on third parties (as measured by the tax), which is the socially optimal result. *See* Masur & Posner, *supra* note 255, at 100-101.

²⁵⁹ Additionally, as observed by Victor Fleischer, there is typically not a “uniform marginal social cost across all individuals and firms” that could be accounted for by a “uniform excise tax.” Fleischer, *supra* note 257, at 1676.

²⁶⁰ *See* Masur & Posner, *supra* note 255, at 105.

²⁶¹ Fleischer, *supra* note 257, at 1680, 1704-1707; Masur & Posner, *supra* note 255, at 106.

²⁶² *See supra* Part I.C.

²⁶³ *Cf.* Gilbert E. Metcalf & David Weisbach, *The Design of a Carbon Tax*, 33 HARV. ENV. L. REV. 499, 522 (2009) (discussing “complicated political considerations” in setting the base for a carbon tax, including that a broader base “increases the number of special interests that will oppose the tax.”).

²⁶⁴ A fourth feature, app notifications, was discussed in Part I but is not included here. Although notifications are an important way to keep users engaged with social media apps, they are less unique to social media platforms, as many apps (for example, a weather or news app) use notifications. Thus, they are excluded from this discussion of Pigouvian taxes aimed at features specific to harms imposed by social media use.

accounting for harms specific to social media platforms should be targeted only at digital platforms that use these three features. This would include the major social media platforms like Facebook, TikTok, Instagram, and YouTube.²⁶⁵ It would not include many digital companies that use some, but not all of these features. For example, Google would not be subject to the Pigouvian tax because it does not use social feedback, although it is subject to traditional DSTs. Amazon similarly lacks an endless feed and social feedback, as would a news website that has digital ads. Under a Pigouvian tax aimed at social media harms, that is the correct result. Studies do not show people are suffering from loneliness, depression, or other mental health crises because they spend inordinate amounts of time on Google or Amazon. Those platforms are not designed to addict their users.

The next step in designing a Pigouvian tax on social media platforms would be choosing a tax base and a rate. An ideal Pigouvian tax would be set equal to the value of the social harm caused by social media use. As previously discussed, it is generally difficult to quantify this harm with certainty, but policymakers could rely on a number of metrics to gain a rough estimate of social costs. For example, they could look at average time spent on the platform and base a tax on minutes or hours spent by users over a certain threshold. Users' time could be valued by estimates of productivity lost or by estimating the mental health costs of social media use, for example. It bears repeating that governments *do* successfully enact taxes aimed at reducing negative externalities without being able to make exact calculations and measurements of social harms, and such taxes often contain a mix of policy considerations that also include political feasibility and administrability.²⁶⁶

Given that the core of the harms discussed in this Article stem from capturing and monetizing user attention, a Pigouvian tax on social media platforms might be best calculated as a fixed dollar amount per minute or hour of time spent on the platform by users. Consider imposing such a tax on TikTok as an example. The platform has approximately 170 million U.S. users who spent an average of 54 minutes per day on the platform.²⁶⁷ This translates into about 329 hours per year per user and almost 56 billion hours of total use per year in the United States. A tax of 1 cent per hour of time spent on the app would generate nearly \$560 million of tax liability in one year. Crucially, if the company changed design features in a way that reduced time users spend on the platform, it would reduce its tax bill. This is the goal. It is possible social media platforms could find a way to maintain their advertising revenues while simultaneously reducing user time on the platform. The social costs of excess social media use would then be reduced.

One disadvantage of basing the tax on hours spent on the platform is that the time spent would have to be reported by the platform company, which may lead to underreporting and other enforcement issues. Another viable alternative for collecting the tax would be to impose it on a percentage of the platforms' revenue from monetizing user attention—in other words, ad

²⁶⁵ For administrability purposes, such a tax should apply only to platforms of a certain threshold size, which could be measured by annual revenue or followers.

²⁶⁶ See Masur & Posner, *supra* note 255, at 138.

²⁶⁷ Backlinko, *TikTok Statistics You Need to Know*, <https://backlinko.com/tiktok-users> (last updated Mar. 8, 2025) (stating that TikTok has approximately 170 million users that spend an average of 53.8 minutes per day on the app).

revenue.²⁶⁸ This metric is more easily observable by tax administrators because there are third parties (the advertisers) that could engage in information reporting and possibly even withholding/collecting of the tax. A Pigouvian tax on ad revenues would resemble a DST, although the percentage of ad revenue collected might be set at a higher rate to achieve the goals of the tax. For example, if TikTok’s U.S. ad revenue for the year is \$10 billion,²⁶⁹ the rate would need to be 5.6 percent to generate the same revenue (\$560 million) as the \$0.01/hour tax on platform use. Unlike a DST, the platforms could avoid the tax by changing design features that subject them to the tax while still relying on digital advertising for revenue.

2. Line Drawing and Additional Considerations²⁷⁰

This Article’s proposal raises questions of why the Pigouvian tax should only apply to social media platforms, and why some, but not all, attention should be taxed. Consider first the broader question of when to tax attention. Much of our attention (e.g., reading a novel) operates outside of markets and should not be taxable.²⁷¹ However, as discussed in Part II, the practice of monetizing customer attention through advertisements started long before the internet or social media. Advertisers did and still do spend money to place ads in newspapers, on television or radio, or on billboards, with a goal of getting attention to sell products. When consumers pay attention to ads in exchange for free services, this is a market transaction, distinguishable from reading a novel. Yet it is hard to imagine—both from a feasibility standpoint and as a matter of sound tax policy—imposing a tax when a person sees an ad in a free newspaper or hears an ad on the radio.

But the placements of advertisements on billboards, radio, print publications, and television differ from digital advertising in a significant way, which supports a different tax result. The former all involve the payment by advertisers for the *opportunity* to capture the attention of unknown consumers, with no guarantee. Because the agreement to pay for and place the ad happens before the consumer sees/hears the ad, the ads are not aimed at a particular individual, nor are they priced based on attention paid by a particular individual. In contrast, digital ads placed on social media are paid for according to how often each individual consumer sees or clicks on the ad.²⁷² Further, they are designed to be presented to particular consumers based on sophisticated machine-learning algorithms.²⁷³ In other words, consumers are directly targeted, based on data, to see specific ads, and the attention paid to the ad generates the payment by the advertiser. Thus, the individual consumer is significantly more involved in the revenue generation and the overall transaction. This is a meaningful economic difference between non-digital and digital advertising.

Concededly, taxing the sale of attention to digital platforms in exchange for free platform services, but not taxing other sales of attention (e.g. watching TV), does require policymakers to

²⁶⁸ Collecting a tax “downstream” at the consumer level will likely make the tax more salient. However, where along a chain of production such a tax is collected does not dictate which party bears the economic burden of the tax, and the tax should be imposed where it can be most efficiently collected (for example, from one party instead of many parties). See Metcalf & Weisbach, *supra* note 263, at 523-24.

²⁶⁹ See Backlinko, *supra* note 267.

²⁷⁰ [Note to draft readers: I am still working through this part and would particularly welcome any feedback or ideas!]

²⁷¹ This is analogous to the imputed income generated by performing labor for one’s self. (e.g., tending one’s own garden). *Supra* note 222.

²⁷² See *supra* Part II.B.2.

²⁷³ *Id.*

draw a line where perhaps no clear line exists. But it is worth noting that the tax law requires policymakers to draw lines all the time. The choice to tax realized income but not unrealized income,²⁷⁴ the sometimes-murky definition of when income is “realized,”²⁷⁵ and the non-taxation of imputed income,²⁷⁶ are all policy choices that draw somewhat arbitrary lines in the name of administrative feasibility. There is enough economic distinction between digital and non-digital advertising, and enough administrative issues with taxing attention paid to non-digital ads, to draw a similar line.

A harder line to draw is the one between the use of digital ads by other platforms that don’t constitute social media. Other digital platforms also place targeted ads with pay structures that are based on clicks and/or impressions. For example, both Google and Amazon feature some digital ads with these types of payment structures.²⁷⁷ When consumers pay attention to ads targeted at them, they are similarly directly involved in revenue generation for the platform. Here, the distinction between social media and other less platforms is less about the economic structure of the transaction, and more about negative externalities. This Article advocates subjecting social media platforms to a Pigouvian tax because there is currently more data supporting social harm caused by use of these platforms. As discussed above, there does not appear to be research documenting addiction to Google, or that young people are at a greater risk of mental health risks due to excessive time spent on news apps, Wordle, or Amazon.²⁷⁸ Further, the very features that distinguish social media platforms from other digital platforms – algorithmic content selection that favors engagement over relevance, endless feeds, and social feedback – appear to be the very features that lead to social harm.²⁷⁹ Future research may support expanding the tax proposed in this Article to additional platforms. It is worth repeating that, although this Article’s proposal does require a line to be drawn, that is often an inevitable part of the exercise of formulating tax policy.²⁸⁰

Several final points are worth mentioning. First, as with any tax, enacting a Pigouvian tax on social media platforms raises questions of economic incidence: who would bear the burden of such a tax?²⁸¹ A tax on a platform might be borne by the platform itself or it might be passed on, for example, through higher prices to advertisers. While questions of incidence are worth exploring and may have distributional consequences, they do not fundamentally alter the analysis here.

²⁷⁴ See I.R.C. § 1001.

²⁷⁵ See, e.g., *Cottage Savings v. Commissioner*, 499 U.S. 554 (1991) (finding exchange of economically equivalent mortgage loans to trigger realization because they possessed distinct legal entitlements, allowing taxpayer to claim significant tax loss with no corresponding economic loss).

²⁷⁶ See *supra* note 222.

²⁷⁷ See Google Ads Help, <https://support.google.com/google-ads/answer/9846714?hl=en> (last visited Nov. 2, 2025) (“With Smart campaigns, you pay only for the actual clicks and calls that your ad receives”); Amazon Ads, https://advertising.amazon.com/lp/grow-your-business-with-sponsored-ads?tag=googhydr-20&ref=pd_sl_yndcdzfyxa_e_gg_nb_us_en_d_core_p_AIMaxTest_653817657300&k_pay%20per%20click&group_185873308923 (last visited Nov. 2, 2025) (“Pricing is cost-per-click, meaning you pay only when a shopper clicks your ad”).

²⁷⁸ Cf. note 192, *supra*.

²⁷⁹ See *supra* note 194.

²⁸⁰ Outside of a Pigouvian tax, there is less justification to treat social media platforms differently than other digital platforms for tax purposes. Accordingly, a general tax on the sale of user attention to platforms – which might look like a DST – could be imposed more broadly across digital platforms. Such a tax is discussed in the next subpart.

²⁸¹ See, e.g., Metcalf & Weisbach, *supra* note 263, at 543.

Ideally a tax set high enough would motivate platforms to change their design features, but a tax passed on to advertisers would generate revenue that could also be used to offset social costs. There is a case to be made that advertisers also bear some responsibility for this social cost by choosing to advertise on these platforms.²⁸²

Another issue related specifically to Pigouvian taxes is whether a tax is an ideal instrument to address social costs as opposed to another tool like regulation. Much scholarship has addressed this question.²⁸³ While a full exploration of choice of instrument is beyond the scope of this Article, it suffices to say that, thus far, lawmakers in the United States have done almost nothing to address the harms of social media through regulation or any other tool.

Finally, there have been recent calls by policymakers and economists to impose a Pigouvian-style tax to address negative externalities imposed by social media.²⁸⁴ To date, no academic work has addressed the justification, feasibility, and design of such a tax. This Article aims to be a first step in that direction and offers “attention” rather than data as the appropriate framework for such a tax. Future work will no doubt further shape and develop the design of taxes meant to address the harms caused by social media.

D. Digital Services Taxes Under the Attention Framework

Reframing social media transactions as a sale of user attention also lends support to proposals for DSTs in the United States (and to current DSTs in foreign jurisdictions). Recall that such taxes generally apply a low rate to the platform’s gross revenue from digital services, which is essentially the platform’s ad revenue. As such, DSTs levy tax on the platforms, not the users. But if such taxes were conceptualized as a “surrogate tax,” they could be thought of as a tax on the sale of user attention.

As discussed above, platform users engage in a taxable transaction when they sell their attention in exchange for free platform services, although taxing them on this exchange is not administratively feasible. In analogous contexts, when it is hard to tax individuals because income is received in kind or is otherwise hard to value, the Code sometimes takes a surrogate approach to taxation.²⁸⁵ Under a surrogate approach, the tax is borne by another party to the transaction

²⁸² Advertisers could, of course, pass the tax on to consumers, which could have regressive distributional consequences. This issue is not unique to a tax on social media platforms and is true of any consumption tax.

²⁸³ See, e.g., Masur & Posner, *supra* note 255, at 100-104; Fleischer, *supra* note 257, at 1687-1690; Brian Galle, *Tax, Command-- or Nudge? Evaluating the New Regulation*, 92 TEX. L. REV. 837, 848 (2014); Louis Kaplow & Steven Shavell, *On the Superiority of Corrective Taxes to Quantity Regulation*, 4 AM. L. & ECON. REV. 1, 1-14 (2002).

²⁸⁴ See Daron Acemoglu & Simon Johnson, *The Urgent Need to Tax Digital Advertising*, NETWORK LAW REVIEW (March 25, 2024) (proposing a 50 percent tax on digital ad revenue for a broad range of digital platforms “to encourage these resource companies...to switch to subscription or other business models that are not based on keeping people addicted and sustaining intense emotional responses”); Ezra Klein, *A Democrat Who is Thinking Differently*, NEW YORK TIMES (Feb. 18, 2025) (interview with Congressman Jake Auchincloss discussing the possibility of a VAT-style tax on attention); Puig, *supra* note 196 (discussing taxing online polarization as a negative externality through various taxes on data).

²⁸⁵ Jay A. Soled, *Surrogate Taxation and the Second-Best Answer to the In-Kind Benefit Valuation Riddle*, 2012 BYU L. REV. 153, 156-57 (2012) (describing surrogate taxation).

because it is generally easier to collect from that party or otherwise easier to administer the tax.²⁸⁶ In other words, imagine that Party A pays Party B in some taxable transaction, but collecting tax from Party B is administratively difficult. The government could instead treat Party A as a surrogate taxpayer for Party B, and impose the tax on Party A. There are two predominant approaches to surrogate taxation: denying a deduction to the surrogate taxpayer or imposing an excise tax on the surrogate taxpayer.²⁸⁷

One example of a surrogate approach is section 274(n) of the Code, which denies employer deductions for certain business meals provided to their employees, rather than taxing the employee on the consumption benefit of the meal.²⁸⁸ Deduction denials or limitations can generate meaningful revenue and reduce economic distortions from not taxing in-kind transactions. One issue with such an approach, however, is that denying a deduction is only meaningful if the entity taking the deduction pays taxes in the relevant jurisdiction. For example, if Facebook (or another digital platform) has an effective U.S. tax rate of zero or close to zero because it generates most income offshore in tax havens, denying it a deduction for U.S. tax purposes would have little to no revenue impact.

An alternative to using a deduction denial to impose a surrogate tax, and one that might work better for foreign or multinational platforms who pay little or low U.S. tax, is to impose an excise tax on the platform.²⁸⁹ An example of such a surrogate tax can be found in Code section 4977(a), which imposes an excise tax on employers for certain fringe benefits provided to their employees. The excise tax applies to certain in-kind perks offered to employees, such as discounts and free services.²⁹⁰ As a response to tax administration challenges associated with taxing these benefits, section 4977(a) allows employers to opt to pay an excise tax equal to 30 percent of the value conferred on the taxable employees, in lieu of reporting taxable income to the employees.²⁹¹ Collecting tax on the transaction via an excise tax vastly reduces complexity because it centralizes tax collection from one source (the employer rather than multiple employees), reduces liquidity concerns arising from taxing employees on non-cash benefits, and obviates the need to value the benefit to the individual employee.²⁹²

Similarly, Congress (or state legislatures) could impose an excise tax on social media platforms as a surrogate for the tax to users from exchanging their attention for platform services. Such a tax

²⁸⁶ *Id.* at 163.

²⁸⁷ Other forms of surrogate taxation exist elsewhere in the Code. For example, the carryover basis rules for gifts provide for a surrogate approach under which the donee of a gift of appreciated property is taxed on the gain that accrues to the donor while the donor holds the property. *See* I.R.C. § 1015.

²⁸⁸ Specifically, Code section 274(n) denies 50 percent of the deduction for the meal, making a simplifying assumption that half of the meal represents taxable consumption and half of the meal is a business transaction. Rather than taxing the employee on 50 percent of the meal's cost, the Code achieves a similar taxable result by denying the deduction for this portion to the employer. Soled, *supra* note 285, at 164.

²⁸⁹ Soled, *supra* note 285, at 175; Calvin Johnson, *An Employer-Level Proxy Tax on Fringe Benefits*, 123 TAX NOTES 483, 483 (2009).

²⁹⁰ I.R.C. § 4977(b).

²⁹¹ The tax is imposed on 30 percent of the “excess fringe benefits,” which is defined by the statute as the total value of excluded fringe benefits over 1 percent of the total taxable compensation paid by the employer. I.R.C. § 4977(b).

²⁹² Soled, *supra* note 285, at 177. Calvin Johnson has proposed a similar excise tax on employers that would apply to a broader range of fringe benefits; the tax would be calculated as 50 percent of “employee meals, entertainment, and recreational and athletic facilities” Johnson, *supra* note 289, at 483.

could resolve valuation, liquidity, and other administrative challenges involved in taxing users on the sale of their attention. Because gross ad revenue is a readily available value on which to base an excise tax on social media platforms, it would make a natural tax base, and policymakers would choose a tax rate to impose on those revenues.²⁹³

An excise tax on platforms that has ad revenue as a base strongly resembles the DSTs discussed above that have been enacted by many foreign jurisdictions. On the surface, they would look identical (a fixed rate times gross ad revenue), although they are conceptually different. Thus, DSTs might be seen as consistent with a regime that taxes attention (rather than data) when they are viewed as a surrogate for an income tax on users.

But an important observation flows from this reframing: Viewing an excise tax on platform ad revenue as a surrogate tax on users responds to a major objection to DSTs. Recall that DSTs have been criticized as inefficient taxes on inputs that result in pyramiding (that is, subjecting businesses to tax at multiple stages of production).²⁹⁴ But this argument assumes the purpose of the DST is to impose a tax on digital platforms for the provision of digital services, when they will be taxed again on their corporate profits. That is, indeed, the function and purpose of a DST. But an excise tax that functions as surrogate tax is intended to capture income to users (albeit from the platform by proxy). This transaction—paying for the attention of users—is not the same as a tax on business inputs. Rather, it is analogous to a tax on labor.²⁹⁵ When a business pays wages to its workers, and those workers are subject to income tax, this is not considered an inefficient tax on business inputs. Labor is generally taxed separately (under an income tax) even in tax systems that have a VAT.²⁹⁶ Similarly, taxing platforms as proxies for users when they sell their attention is a separate transaction that should not be categorized as taxing business inputs.

Put more simply, critics of DSTs often make the argument that it is unfair to tax digital platforms on gross revenues from advertising when those platforms are also subject to corporate tax on their net profits. But those critics would not assert that we can't tax both the wages of a company's workers and the company's net profits: most tax systems do just that. And we could accomplish the latter by either taxing the workers directly, denying the company a deduction for the workers' wages, or imposing an excise tax on the payment of wages. Surrogate taxes on social media platforms would accomplish a similar result. The platforms would pay the tax as a percentage of their ad revenue, but the tax would be on the sale of attention by the users.

IV. CONCLUSION

As social media and other technology companies continue to dominate the marketplace, a new understanding of the economy is in order. The most valuable and sought after asset in the digital age is human attention. This insight demands a new legal framework to characterize the relationship between users and platforms, including a newly imagined tax regime. This Article aims to begin the conversation about how to tax the attention economy. There are a host of

²⁹³ The excise rate could be adjusted downward to account for the fact that gross ad revenues include the platforms' net profits, which is not part of the value of the platform services taxed to the users.

²⁹⁴ *Supra* notes 87-90 and accompanying text.

²⁹⁵ *See supra* Part III.B.4.

²⁹⁶ James M. Bickley, *Flat Tax Proposals and Fundamental Tax Reform: An Overview*, Congressional Research Service, *published in* TAX NOTES (Jan. 2006).

additional tax and other legal implications not explored here, including the implications for taxing the profits of multinational corporations, which will no doubt be explored in future work.

The monetization of user attention by social media platforms has real consequences that merit a response by lawmakers. Currently, the tax system completely overlooks the sale of user attention – at an average of 2.5 hours per day—by social media users to platforms. Ignoring these transactions for tax purposes only encourages the proliferation of the business model employed by these platforms. That model maximizes profits by aiming to addict users, and the social costs are predictable and well-documented. The tax system can, and should, play a role here. Viewing the digital economy through the lens of attention offers a simpler and more administrable solution to taxing social media platforms than a data-based model. Attention can be quantified, located, and taxed. Taxing platforms – whether under a Pigouvian theory or a surrogate tax theory – could be an important step towards regulating excess social media use.