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Abstract

Digital technologies have transformed the news landscape, shifting consumption from print media toward online providers. This has allowed news outlets to collect richer data on individual readers, and to use those data both to tailor the news a reader sees—which stories appear and how they are framed—and to sell more precisely targeted advertising. Online news outlets also increasingly recruit readers from social media, amplifying incentives to capture reader attention through sensationalized stories and other techniques to increase engagement. Generative AI is likely to accelerate this trend by lowering the cost of personalizing news. Whether cheaper production and finer personalization raise or lower consumer welfare depends on how closely the objectives firms maximize are aligned with the underlying preferences of consumers. This review studies how the shift toward online news consumption affects both the supply and the demand for news and draws potential implications for consumer welfare.

Keywords: news consumption, engagement, algorithms, generative AI, social media, attention economy

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1 INTRODUCTION

Over the past three decades, news consumption has shifted from printed newspapers to online outlets, aggregators, social media feeds, and, most recently, AI assistants. This shift changed what news producers can observe about their readers. Where a print publisher saw only circulation totals, a digital outlet observes granular usage data, including clicks and shares. Digital outlets can also act on that information in real time, for example, by changing the framing of a news article.

Recent surveys illustrate how news consumption patterns have changed. By 2025, more than half of Americans—56%—report getting their news from digital devices such as smartphones, computers, or tablets. In comparison, 32% still turn to television, 11% to radio, and just 7% to print publications (Pew Res. Cent., 2025a). Social media has also become a major source, with 53% of Americans saying they at least occasionally get news via these platforms (Pew Res. Cent., 2025b). Turning online readers into paying customers remains a challenge for online news outlets: only one in five Americans pays for any type of online news, leaving outlets increasingly dependent on advertising (Reuters Inst. Study Journal., 2025).

In this review, we study how the shift toward online news consumption affects both the supply and the demand for news. On the supply side, we give special attention to the incentives created by monetizing attention through advertising: while advertising has long financed newspapers (Anderson & Coate, 2005; Angelucci & Cagé, 2019), digital distribution lets outlets act on the reader-level data described above and experiment systematically with engagement at the level of the individual article (Armstrong, 2006; Gentzkow, Shapiro, Yang & Yurukoglu, 2024; Rochet & Tirole, 2003). On the demand side, we review studies examining

what people actually want from the news and whether they tend to consume news aligned with their underlying preferences.

The welfare effects of individual-level personalization enabled by digital news consumption are ambiguous. News outlets increasingly rely on traffic from social media networks that reward engagement. Whether platforms' objective of maximizing engagement helps or harms consumers depends on whether engagement is a good proxy for consumer welfare. When the two are strongly aligned, better measurement of digital engagement raises welfare by reducing search costs and improving matching (Zielnicki, Aridor, Bibaut, Tran, Chou & Kallus, 2026). But short-run engagement may track consumer satisfaction only weakly—or even negatively—so a platform can raise engagement while lowering welfare.

Our review builds on several earlier surveys. Aridor, Jiménez-Durán, Levy & Song (2024) provide an overview of the economics of social media, while Strömberg (2015) reviews the consequences of mass media for politics. A related literature examines the effects of specific digital technologies, such as the internet, on political outcomes (Zhuravskaya, Petrova & Enikolopov, 2020) and social capital (Campante, Durante & Tesei, 2022). Goldfarb & Que (2023) examine the benefits, costs, and externalities of digital data and privacy. A large adjacent literature studies misinformation and "fake news" specifically, including its prevalence, diffusion, and countermeasures (e.g., Allcott & Gentzkow, 2017; Pennycook & Rand, 2021; Vosoughi, Roy & Aral, 2018); we refer readers to Aridor et al. (2024) for coverage of that work and focus here on how digital technologies have changed the supply and demand of mainstream news.

The review proceeds as follows. Section 2 provides stylized facts on the digital change in the news market. Section 3 provides a discussion of engagement and consumer welfare.

Section 4 examines implications for the supply of news. Section 5 reviews the demand side. Section 6 examines the externalities of news consumption and asks which instruments could correct them. Section 7 concludes.

2 THE DIGITAL CHANGE IN NEWS MARKETS

We lay out some stylized facts about how news production, distribution, and consumption have changed with the advent of digital technology.

2.1 Timeline of Digital Transformation

Figure 1 plots selected digital technologies that have transformed the market for news, ordered chronologically and grouped into three functions: measuring reader behavior, ranking and distributing content, and generating content.

Collaborative filtering, which infers what a reader will value from the choices of similar readers, was developed in 1994 (Resnick, Iacovou, Suchak, Bergstrom & Riedl, 1994). The main impediment to scaling up this approach was the absence of behavioral data at scale. As a result, it took more than a decade for Google News to personalize its recommendations based on click histories (Das, Datar, Garg & Rajaram, 2007). From the mid-2000s onward, measurement on publishers' websites leveraged real-time dashboards, reducing the cost of learning what readers engage with. Social media platforms have adopted ranking distribution at different times. For example, Facebook adopted feed ranking before Twitter, Instagram abandoned the chronological feed in 2016, and TikTok made its algorithm the core of the product rather than a supplement. Generative AI significantly lowers the cost both to generate

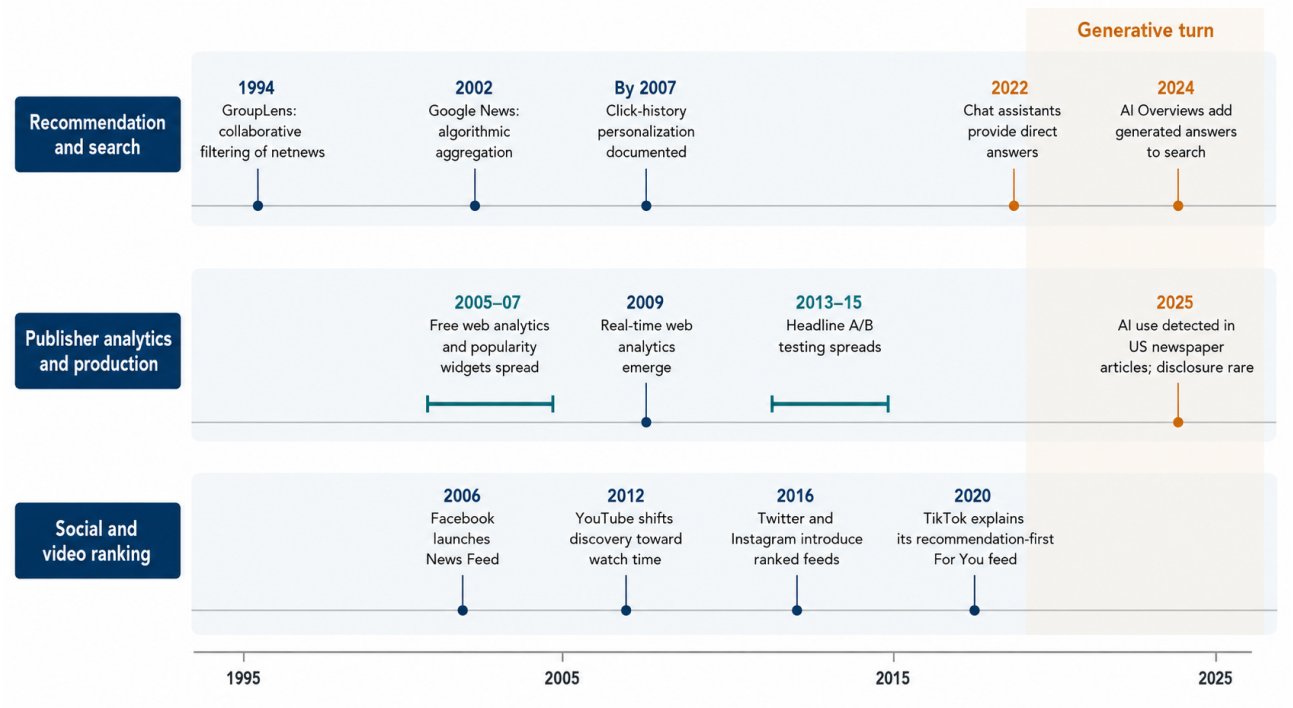

Figure 1: **Selected milestones in digital news measurement, ranking, and generation.** The three rows distinguish (*i*) measurement of reader behavior (publisher analytics and production tools), (*ii*) ranking and distribution (recommendation, search, and social and video feeds), and (*iii*) content generation. Milestones are ordered by year of introduction.

news and to customize a given story to different readers (Chopra, Haaland, Roeben, Roth & Sticher, 2025). Recent evidence indicates increased reliance on generative AI in news production (Russell, Karpinska, Akinode, Zhou, Thai et al., 2026).

2.2 Where News Is Consumed

Digital technologies have also transformed where news is consumed over the past three decades. Not only has consumption shifted from print newspapers to digital venues, but it has also moved from publishers' own properties to third-party platforms, such as social media and news aggregators.

According to the 2026 *Digital News Report*, 54% of roughly 100,000 online respondents across 48 markets had used social or video networks for news in the previous week; television and news organizations' own sites and apps remained close behind at approximately 50% (Egan, Robertson, Ross Arguedas, Newman, Nielsen et al., 2026). Reliance on television and news sites has declined, while the importance of social and video networks has risen. Figure 2 describes these trends alongside the longer-run decline in US print circulation. Measuring news consumption directly from smartphone data shows several striking patterns: during the 2024 US election, news apps accounted for less than 1% of the exposure to news content, with social media accounting for over 30 times as much (Aridor, Dekel, Jiménez-Durán, Levy & Song, 2025). In fact, the median participant in the study by Aridor et al. (2025) was exposed to election-related terms for only 21 seconds per day and was exposed to almost 10 times more sports and entertainment celebrities than politicians. A further movement within third-party platforms concerns *who* produces the news people encounter there. A

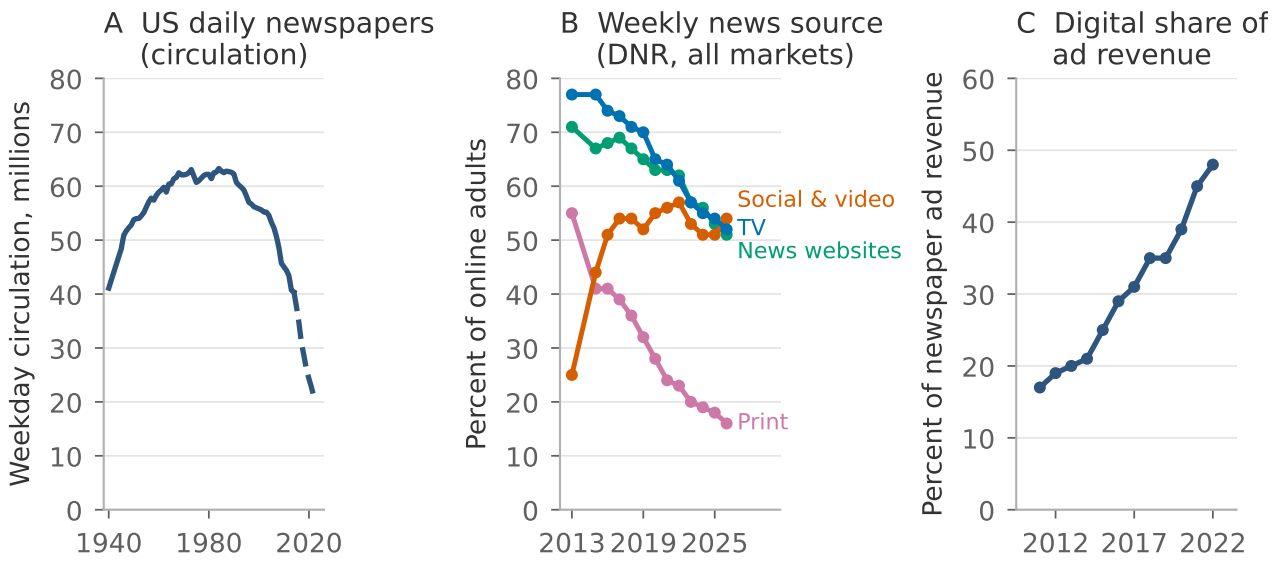

Figure 2: **The long decline of print and the platform shift in weekly news use.** Panel A: estimated total weekday circulation of US daily newspapers, 1940–2022, in millions; circulation peaked at 63 million in 1984 and stood at 21 million in 2022. Panel B: share of online respondents who used each source for news in the previous week, averaged across the markets covered by the *Digital News Report* (Egan et al., 2026). Among the nine markets covered since 2013, social media and video networks rise substantially through 2026 without overtaking television. Panel C: share of US newspaper companies' advertising revenue coming from digital advertising, 2011–2022, which rose from 17% to 48%. Sources: Pew Research Center, *Newspapers Fact Sheet*; Reuters Institute, *Digital News Report* interactive.

growing share of respondents in the *Digital News Report* report that they consume content from individual personalities—podcasters, YouTubers, and newsletter writers—rather than news organizations (Egan et al., 2026).

2.3 What Is Produced

A well-established finding is that there is large variation in political slant across news outlets (Gentzkow & Shapiro, 2010). Article-level data highlight that much of the variation in online news content lies within rather than between outlets. To decompose the relative importance of these margins in the context of political slant, Braghieri, Eichmeyer, Levy, Mobius, Steinhardt

& Zhong (2025) train a measure of article slant on expert ratings and apply it to the near-universe of hard news published online by the 100 most-visited US outlets in 2019. Outlet fixed effects account for roughly 33% of the variance in slant. The remaining 67% arises within outlets.

Production also varies across the channels through which publishers distribute their content, and not simply across outlets. Online headlines at major German newspapers are considerably more likely to be emotional than print headlines (Section 4.2). Digital production, moreover, rests heavily on aggregation and repackaging: less than one third of the content produced by French online news media in 2013 constituted original reporting (Cagé, Hervé & Viaud, 2020).

The cost of producing and distributing publishable video has fallen toward the cost of producing text, as studios and camera crews gave way to smartphone cameras and cheap editing software, and limited broadcast slots to platform hosting. Video formats have accordingly become far more prevalent: across the 48 markets covered by the 2026 *Digital News Report*, 77% of respondents watched online news video in the previous week, with growth concentrated on third-party platforms (Egan et al., 2026). That growth does not reflect a stated preference for the format—a majority of respondents still say they would rather read news than watch it (Egan et al., 2026)—which suggests that supply and platform ranking, rather than demand, account for much of the shift.

2.4 Digital Technologies and the Structure of Revenue

The composition of revenue has shifted along with attention. According to the Pew Research Center's *Newspapers Fact Sheet*, advertisers, not readers, were long the dominant source of newspaper revenue: in every year from 1956, when the series begins, through 2012, US newspapers earned roughly two to five times as much from advertisers as from readers. In 2005, for example, the industry took in an estimated $49 billion in advertising revenue against $11 billion in circulation revenue (Pew Res. Cent., 2023). Advertising and circulation revenue followed different paths. The former fell by 80% in nominal terms, to under $10 billion by 2022, while the latter remained close to $11 billion. In 2020, reader payments exceeded advertising revenue for the first time in this series. This reflects the collapse of advertising rather than growth in reader payments: the industry has both shrunk and reweighted, shifting from selling attention to advertisers to selling content to readers.[1]

These trends do not imply that incentives to maximize engagement in the news market have weakened, for three reasons. First, the advertising revenue that remains is more digital—its share rose from 17% in 2011 to 48% in 2022 among publicly traded newspaper companies (Panel C of Figure 2)—and digital advertising is priced on measured engagement in a way print advertising never was. Second, platforms and aggregators that now intermediate a growing share of news consumption are financed almost entirely by advertising and optimize engagement directly. Third, even a publisher financed by subscriptions cannot opt out, because new subscribers are acquired through those platforms and aggregators (Simonov, Mikhailov, Enikolopov & Durante, 2026).

[1]These figures describe the advertising revenue of US newspaper companies, not advertising in general. Advertising spending has partly moved to social platforms, whose price advantage per ad impression over news outlets widens as readers divide their attention across publishers (Athey, Calvano & Gans, 2018).

3 MEASUREMENT, ENGAGEMENT, AND WELFARE

News outlets compete for attention in the digital news market. While capturing reader attention has always been important for newspapers, digital platforms give much more scope for personalization and monetization of user data. News outlets can now observe how readers respond to article-level changes (e.g., by varying whether a headline is presented in a neutral or negative frame) and to different stories. A click is monetized in two ways. Clicking on an article generates advertising impressions on the article page, and those ads are priced higher when the reader can be targeted using historical behavioral data. A reader arriving from a feed or aggregator is also a potential future subscriber. Both channels link revenue to the opening of a particular item, giving news outlets strong incentives to modify their news to maximize engagement. Section 3.1 spells out what exactly is new here relative to print.

Throughout, by the *digital news market* we mean the set of surfaces on which news is distributed and monetized online. On its own website or app, a publisher controls presentation, observes the reader's full response, and sells advertising or subscriptions directly. On third-party surfaces—social feeds, news aggregators, and now generative assistants—its content is ranked alongside everything else, and the ranking is trained on data the publisher cannot observe. The distinction matters for what follows: the measurement advantages described below accrue fully only on surfaces the publisher owns.

3.1 From Outlet-Level to Item-Level Measurement

As a starting point, it is useful to compare what news outlets could observe before and after the shift to digital media. When the dominant source of news was printed newspapers,

news outlets could observe both newspaper circulation and audience composition, but they could not isolate which individual articles drove their overall demand. However, advertising revenue still affected news production. As illustrated in Strömberg (2004), groups that are more valuable to advertisers receive more news coverage. There is also an active debate around whether media bias—the tendency of news outlets to report the news in a slanted way—reflects supply-side or demand-side forces. Bias can persist—and even increase—in highly competitive markets if media bias reflects demand-side forces, as we discuss in Section 5. Thus, if digital news lowers entry costs and increases competition in the news market, the effect on media bias in equilibrium depends on whether consumers value accuracy and can verify the accuracy of the news (Gentzkow & Shapiro, 2008).

While engagement-seeking is not a new phenomenon, digital news allows news outlets to optimize for engagement in a much more fine-tuned way. First, online news allows the outlet to collect feedback on engagement at the article level and the individual reader rather than the outlet level and aggregate audience. Whereas a print newspaper is a jointly priced bundle of stories, an online news outlet can collect advertising revenue article by article. This weakens incentives for cross-subsidies between, e.g., entertaining content and investigative journalism. Second, feedback on engagement arrives almost immediately online, allowing for systematic experimentation with headlines, story placements, and recommendations. Third, while a print newspaper is similar for everyone, an online newspaper can be customized to the individual reader, e.g., by highlighting different content to different groups based on their demographics or prior readership data. On top of these changes, news outlets are increasingly getting traffic from social media sites, which encourage them to write news in a style that maximizes clicks from social media platforms. Thus, both the technology

and nature of readership allow and call for much more engagement maximization than in the traditional print media. Greater personalization, however, need not raise platform revenue in equilibrium: in Chen (forthcoming), platforms compete for attention by investing in free services and resell that attention as targeted advertising, and more informative data typically improves consumer–product matching while lowering both advertising revenue and platform investment.

These changes are especially relevant when information is plentiful and attention is limited (Simon, 1971). Competition for attracting the attention of readers can shift news stories toward salient factors (Bordalo, Gennaioli & Shleifer, 2016, 2022), and greater competition does not necessarily improve quality, especially when news outlets compete for attention rather than subscriptions (Aridor et al., 2024; Chen & Suen, 2023). Akerlof, Carvalho, Holden & MacMillan (2026a) propose a model of the attention economy: when firms invest in grabbing attention, entry scatters the attention left for goods whose payoffs necessitate sustained consumption. Their model illustrates the possibility of an equilibrium in which shallower content crowds out deeper content and welfare falls as entry costs decline.

Before turning to how these incentives play out, it is worth differentiating three margins of personalization, since the welfare analysis in the remainder of this review differs across them. The first concerns the *selection* of articles through recommender systems, which critically guides consumers' attention. The second is *presentation*: how a given article is packaged without modifying the underlying reporting, e.g., through the framing of the headline or the images attached to the article. The third is *generation*: rewriting the article text itself for a particular reader, which generative AI makes feasible at scale (Chopra et al., 2025). When we examine whether personalization benefits or harms readers, the answer may differ by

margin.

3.2 Platform Incentives and Consumer Welfare

Digital news outlets not only track how their readers spend time on their own platform, but also how effective their articles are in attracting readers from other platforms, such as social media sites and news aggregators. As discussed in Section 2.4, these referral channels have become central to reader acquisition. Because aggregators and social media sites rank content using their own engagement statistics, news outlets have an incentive to produce content more likely to generate external platform referrals.

The incentives of social media platforms need not coincide with those of news outlets or their readers. Beknazar-Yuzbashev, Jiménez-Durán & Stalinski (2024) model an advertising-financed social media platform—now critical for the distribution of publishers' content—and show that a platform financed solely through advertising may have an incentive to supply harmful content whenever it raises engagement; a subscription-financed platform, whose revenue depends on renewals, faces weaker incentives of this kind.

Maximizing engagement can serve readers by giving them more of what they want; but when it privileges stories that grab clicks over content that retains readers in the long run—such as costly investigative journalism—it caters to short-term impulses rather than deep preferences. At the same time, responsiveness to attention is not in itself distortionary: even a benevolent news outlet might optimally engage in selective reporting by focusing on stories with high newsworthiness (Armona, Gentzkow, Kamenica & Shapiro, 2024).

3.3 Why Engagement Could Be a Poor Proxy for Welfare

While some platforms might deliberately sacrifice reader utility for engagement (Beknazar-Yuzbashev et al., 2024), Kleinberg, Mullainathan & Raghavan (2024b) show that misalignment between content and underlying preferences can occur even for a platform that fully tries to cater to its readers' tastes. If choices (e.g., clicks) represent what users actually want, maximizing engagement from clicks will also maximize user welfare. However, time-inconsistent preferences create an identification problem because people could, for instance, click on stories in the moment that are not consistent with their long-term utility. For instance, a highly negative news story might lead to greater engagement because it makes the story more tempting to read or more likely to capture a user's attention (Robertson, Pröllochs, Schwarzenegger, Pärnamets, Van Bavel & Feuerriegel, 2023), but over time, readers might derive lower utility if the news is consistently framed negatively.

Epstein, Jahanbakhsh, Piccardi, Peytavin, Gallegos et al. (2026) provide direct field evidence on this misalignment. Annotating the basic human values expressed in the X feeds of 715 US users, they find that the inventory of posts from accounts users choose to follow reflects users' self-stated values, whereas the value expressions the engagement-based ranking amplifies correlate *negatively* with those stated values (with stated values being themselves survey measures, subject to the caveats discussed in Section 6.6). Distortions can accordingly enter at two margins: at the ranking margin, even when the underlying portfolio of sources is well chosen, or at the portfolio margin, through the inertia and misperception of source quality that can separate consumption from preferences, as Section 5 documents.

News platforms and social media sites might deliberately magnify these biases through

platform and product design (Bursztyn, Jiménez-Durán, Leonard, Milojević & Roth, 2026c). Eliaz & Spiegler (2011) offer a theoretical benchmark: firms can invest in drawing attention to an offer independently of its quality, thereby making grabbing attention a substitute for improving the product. Strategies that exploit self-control problems—such as push notifications, autoplay, sensational framings, and infinite scroll—could fuel a digital addiction in which users spend excessive amounts of time on the platform even though it makes them feel worse off overall (Braghieri, Levy & Makarin, 2022; Collis & Eggers, 2022; Rosenquist, Scott Morton & Weinstein, 2022). Platforms might also try to raise the cost of absence for non-users by making it feel essential to spend time on the platform to follow the national conversation (Bursztyn, Fasnacht, Handel, Jiménez-Durán, Leonard et al., 2026a), e.g., by regularly posting 'breaking news' with a sensationalist framing.

4 THE SUPPLY AND CURATION OF NEWS

With news consumption shifting from print to online, the incentives facing news outlets are substantially altered. In this section, we discuss how digital technologies have affected the supply and curation of the news.

4.1 Advertising and Revenue

News outlets are two-sided businesses with two revenue sources: subscription revenue from readers and advertising revenue from advertisers (Anderson & Gabszewicz, 2006). As discussed in Section 2.4, advertising revenue from print media has collapsed, and subscription revenue has become increasingly important as news consumption has shifted from print

to online. There are also large differences between news outlets in whether they primarily rely on subscription revenue or advertising revenue. While outlets such as *The New York Times* get around 69% and 20% of their revenues from subscriptions and advertisements, respectively, many digital news outlets primarily rely on advertising revenue, which gives different incentives for engagement maximization. In an advertisement-funded model, the news outlet gets paid per click, making it easy to infer the marginal contribution of each article. In a subscription-based model, the news outlet is paid when users sign up and renew their subscriptions. The content that maximizes engagement in an ad-supported model is not necessarily the same content that maximizes subscriptions in a subscription-based model. In practice, many news outlets use a mixed format in which users encounter a paywall that requires a subscription after they have exhausted a set number of free articles. Optimally setting this threshold demands balancing the reduction in advertising revenue against the increase in subscription revenue from a stricter paywall.

A series of papers uses quasi-random variation to examine how shocks to advertising revenue affect the content newspapers supply. Bhuller, Havnes, McCauley & Mogstad (2024) provide causal evidence from Norway on how the internet affected the market for print media. Using quasi-exogenous variation in broadband internet availability, they find that broadband internet triggered large reductions in print media and equally large increases in online media. Newspaper revenues fell dramatically, reflecting that most newspapers relied on a fully ad-supported model for their online content during the expansion. Local news outlets responded by cutting costs, decreasing their share of tabloid content, and supplying more serious news less likely to be duplicated on other sites. Several related papers examine how direct shocks to advertising revenue affect news outlets. Angelucci &

Cagé (2019) find that French newspapers reduced their journalism-intensive content and subscription prices after the introduction of advertising on French television. Angelucci, Cagé & Sinkinson (2024) similarly find that broadcast television in the United States negatively affected newspaper readership and advertising revenue, which newspapers responded to by reducing the supply of local news. Djourelova, Durante & Martin (2025) study how the staggered introduction of Craigslist—which depressed demand for classified ads in newspapers—led the local newspapers most dependent on classified ads to cut newsroom staff and reduce their coverage of local politics. These studies show that revenue shocks affect journalistic content choices, such as whether to give precedence to local news content.

Whether a news outlet prioritizes ad revenue or subscription revenue might also have important consequences for how much a news outlet has to prioritize investigative journalism and other high-quality content. Using quasi-random variation in when users hit a paywall requiring them to subscribe to keep reading news, Martin, Vasserman & Pfiffer (2026) investigate what content is more prone to convert readers into subscribers. They find that readers are highly willing to pay for socially valuable "hard" news, such as local politics and public health, and that engagement data severely underestimate demand for investigative journalism: news readers' marginal "willingness to pay in attention" is systematically different from their marginal willingness to pay in dollars. The next subsection investigates how this willingness to pay in attention shapes online news.

4.2 Responses to Attention Incentives

Since online news outlets can easily observe people's marginal willingness to pay in attention, they can tilt their coverage towards stories that are more likely to receive closer attention. Sen & Yildirim (2015) find that stories that initially receive more clicks are more likely to receive follow-up coverage. Cagé, Hervé & Mazoyer (2022) find that, conditional on a story's newsworthiness, stories that get more coverage on social media get more coverage in the mainstream news. The effect is pronounced for media that relies more strongly on advertising revenues, again underscoring how content coverage and business models interact. Several studies have also used randomized headline experiments to study the causal attributes of media engagement. Robertson et al. (2023) find that more negative headlines generate more clicks. More specifically, they document that each additional negative word increases the click-through rate by 2.3%, helping explain why online news is commonly framed negatively. Hopkins, Lelkes & Wolken (2025) find that headlines that were randomized to include racial/ethnic identities generated more clicks. While these studies thus show that readers allocate more attention to stories with a negative or identity-oriented frame, they do not establish how journalists strategically respond to these incentives. Berger (2026) documents that online headlines are more negative and emotional than their print version counterparts. In an experiment with German journalists, Berger (2026) further finds that financial incentives to attract attention generate more negative and more emotional headlines. In a matched online experiment, attention-grabbing headlines also attract more attention among readers at the cost of lower learning. Balbuzanov, Gars, Stalinski & Tjernström (2025) conduct a field experiment with a Kenyan news outlet and study how pay-per-click or piece

rate compensation affects content choices. Pay-per-click payment leads to less local news reporting and more attention-grabbing political stories that increase engagement. It also leads to less positive language in both the headline and article bodies. Serra-Garcia (2026) varies whether freelance professionals in the US face attention incentives when summarizing scientific studies. Attention incentives lead to less informative summaries that receive higher click rates, illustrating an attention–information trade-off.

4.3 Algorithmic Curation

As people increasingly get their news from social media platforms such as Facebook and Instagram, it becomes important to understand how the algorithms that control people's social media feeds affect their news consumption. Instead of having a chronological feed, most social media platforms rely on an algorithmic feed to increase engagement and time spent on the platform. This has important consequences for which news stories are commonly featured on their platforms.

A collaboration between academic researchers and Meta researchers during the 2020 US election—the US 2020 Facebook and Instagram Election Study—resulted in a series of studies that provide causal evidence on algorithmic curation and news consumption on social media. Guess, Malhotra, Pan, Barberá, Allcott et al. (2023a) randomize 23,391 Facebook users and 21,373 Instagram users to either a 'status quo' algorithmic feed control group or a chronological feed treatment condition. The chronological feed treatment decreased time spent on the platforms and activity, consistent with algorithm-based feeds being designed to increase engagement. It also increased the amount of political and untrustworthy content on

both platforms, as well as ideologically mixed content on Facebook. Within the same project, removing reshared content from feeds sharply reduced exposure to political news and to untrustworthy sources without detectably changing political attitudes (Guess, Malhotra, Pan, Barberá, Allcott et al., 2023b). Also as part of the same project, Nyhan, Settle, Thorson, Wojcieszak, Barberá et al. (2023) find that Facebook users are frequently shown ideologically aligned news.

In an experiment with Americans active on X (formerly Twitter), Gauthier, Hodler, Widmer & Zhuravskaya (2026) paid respondents to use either the algorithmic feed or chronological feed available on the platform. They find that switching from a chronological feed to an algorithmic feed increases engagement and shifts political positions towards conservative positions. By contrast, switching from an algorithmic feed to a chronological feed had no comparable effects. Studying potential mechanisms, they find that algorithmic feeds on X promote conservative content, demote posts from mainstream media, and lead users to follow conservative political activist accounts, which they continue to follow even after switching off the algorithm. Users switching to a chronological feed thus still inherit material promoted by the earlier algorithm. In an experiment with 8 million social media users in India, Kalra (2025) replaces algorithmic ranking with random content delivery. Usage on the platform falls by 35%, again indicating how algorithmic feeds help raise engagement. While exposure to toxic content also falls by 27%, it is mainly driven by reduced platform usage by users with a high interest in toxic content.

A common concern about social media platforms is that they amplify certain types of political news more than others. Huszár, Ktena, O'Brien, Belli, Schlaikjer & Hardt (2022) study algorithmic amplification of politics on Twitter (before it was bought by Elon Musk

and renamed X) using a large experiment with nearly 2 million daily users who are randomly assigned a chronological feed or a personalized algorithmic feed. They find that the algorithm generally favors mainstream right-wing political parties over mainstream left-wing political parties. It also favors right-leaning news sources in the US. Perhaps surprisingly, they find no evidence that the algorithms amplify politically extreme content over moderate content. Similarly, Brown, Bisbee, Lai, Bonneau, Nagler & Tucker (2026) study algorithmic selection on YouTube and find a moderate conservative pull and no evidence that the algorithm drives people towards increasingly extreme content. Instead, the algorithm promotes an increasingly narrow range of ideological content, producing mild ideological echo chambers.

Algorithms employed by news aggregators also play an important role in people's online news consumption. Studying Yandex News, Russia's largest aggregator, Simonov et al. (2026) estimate that occupying the top five news blocks for a day raises an outlet's traffic by nearly 380,000 visitors. A law that made the aggregators less likely to feature independent outlets led these removed outlets to favor longer articles with longer titles less optimized for algorithmic inclusion, indicating how algorithmic selection affects not only the type of stories people read but also which type of stories are written.

4.4 Generative AI Intermediation

Generative AI has made it possible for news aggregators, search engines, and chatbots to generate news articles 'on demand' instead of referring users to an external news outlet. An experiment by Luettgau, Kirk, Hackenburg, Bergs, Davidson et al. (2025) finds that task-directed conversations with AI to research political topics increase political knowledge to the

same extent as self-directed Google search. Furthermore, Cho, Huang, Pacelli & Rennekamp (2026) find that AI summaries improved processing of articles in *The Wall Street Journal*, suggesting that AI summaries can improve the user experience when used strategically by a publisher. While AI conversations or summaries can be useful tools for acquiring information, the larger question for the news market is how to finance news production when AI platforms deliver news summaries without a matching increase in referral traffic. Agarwal & Sen (2026) conduct a field experiment where a Chrome extension blocks Google's AI Overviews for a subset of users. Their results show that the AI Overviews reduce organic clicks by 39.8% without improving the user experience. Publishers can respond to the threat of AI intermediation by blocking AI crawlers from accessing their news.

Zhou, Proserpio & Goli (2026) find that publishers that block AI crawlers are disproportionately the largest, most factually reliable, and centrist-to-left outlets. This selective exit degrades the pool of sources available to platforms such as ChatGPT and Perplexity—toward lower factual quality and a more rightward slant—while the displaced referral traffic concentrates among the largest remaining accessible outlets. Chan (2026) formalizes generative AI intermediation in a theoretical framework and shows that an AI platform that does not internalize the continuation value of publisher content retains too little referral traffic, so that the market for costly human content production can collapse. Stiglitz & Ventura-Bolet (2025) obtain a related equilibrium result in which cheaper synthetic content lowers truthful provision. Finding ways to split the revenue between the AI platforms and news outlets is therefore important to sustain high-quality news reporting.

Generative AI also changes what can be measured, and on this margin it may work in the opposite direction. Every earlier technology in Figure 1 lowered the cost of observing

behavior; language models also lower the cost of evaluating *content*. An article can be scored for reliability, slant, or informativeness at near-zero marginal cost (e.g., using the procedure Braghieri et al. (2025) employ for research purposes: train on expensive expert labels, then apply at the scale of publication). Whether such scores help readers depends on what they encode—they automate the judgment of whoever produced the training labels (Kleinberg, Ludwig, Mullainathan & Raghavan, 2024a)—and evidence on credibility labels shows limited average effects on consumption (Aslett, Guess, Bonneau, Nagler & Tucker, 2022). Nonetheless, cheap content evaluation is the first technology in this sequence that could, in principle, be used to optimize for quality rather than engagement, a possibility we return to in Section 6.6.

5 THE DEMAND FOR NEWS

Digital technologies provide rich information on user behavior, which could be useful to better understand the demand for news. While it is common to infer people's preferences from their behavior, observational data on news consumption can be uninformative about underlying preferences for many reasons. News articles are multi-dimensional experience goods whose quality and fit can only be judged after consumption (Gentzkow, 2018). The resulting matching problem is exacerbated by the sheer volume of digital news, its dispersion across sources of varying quality, and the presence of actors with political or economic motives to distort the media landscape. Social media networks and news aggregators might also try to maximize engagement on their platforms rather than reader utility, making the matching problem more complex.

It is well established that media bias is prevalent, but it remains an open question whether

it mainly originates on the supply or the demand side. Potential supply-side explanations include the direct preferences of media owners or their employees, as well as pressure from the government, advertisers, or other third parties (Gentzkow, Shapiro & Stone, 2015). Potential demand-side explanations include belief confirmation motives and quality uncertainty (Gentzkow & Shapiro, 2006). These demand-side explanations point to a fundamentally different story for why consumers demand aligned news. In belief-confirmation stories, readers derive psychological utility from reading news aligned with their prior beliefs and make a trade-off between belief utility and accuracy concerns (Mullainathan & Shleifer, 2005). Under quality uncertainty, readers value only accuracy and update positively toward news outlets that report news closer to their prior beliefs (Gentzkow & Shapiro, 2006). While recent advances in AI could help solve this matching problem, whether an improved matching process will increase the quality of the news people consume depends on whether people primarily want to read confirmatory news or more accurate news.

In a seminal study, Gentzkow & Shapiro (2010) measure the slant of US daily newspapers from the similarity of their language to that of congressional Republicans or Democrats. They document a preference for like-minded news, with firms responding to it: consumer tastes account for roughly 20% of the variation in measured slant, whereas the identity of a newspaper's owner explains far less. Audiences respond to movements in slant systematically. Durante & Knight (2012) study responses to a right-wing shift of Italian public television after the 2001 Italian election. They find that right-leaning viewers increased their propensity to watch the public channels, and some left-leaning viewers switched to a public channel that remained under left control, partially offsetting the shift in content. Spanish television audience data indicate that demand for partisan news becomes more polarized during

election campaigns, as viewers increasingly avoid coverage favorable to the opposing party (Menéndez, 2026). Responses to fact-checking show similar patterns: although fact-checking increases the perceived accuracy of news, it generates only very muted additional demand when the source is already politically aligned (Chopra, Haaland & Roth, 2022).

This evidence documents *that* people demand aligned news, but not *why*—and the two leading explanations carry opposite welfare implications. In a study designed to separate belief confirmation motives from accuracy concerns, Chopra, Haaland & Roth (2024) experimentally vary beliefs about whether a news outlet reports the news in a left-wing-biased way, right-wing-biased way, or politically neutral way. They find an asymmetric response to perceived bias: Right-leaning respondents reduce demand for left-biased news but not for right-biased news, while left-wing respondents reduce their demand for right-wing-biased news but not for left-wing-biased news. Respondents thus *tolerate* selective reporting, but only when the selective reporting is in line with their own political views. A structural estimation exercise suggests that readers place about equal weight on belief confirmation motives and accuracy concerns.

Whether readers can in fact verify accuracy—the condition on which the competitive discipline of Section 3.1 turns—is ultimately a measurement question. Angelucci & Prat (2024) combine a protocol for identifying major political news stories, eleven monthly surveys with 15,000 US participants, and a model of news discernment. When confronted with a true and a fabricated version of a major political story, 47% of respondents confidently select the true story and only 3% confidently select the fabricated one, with the remaining half uncertain. Partisan congruence between respondent and story affects discernment, but its impact is up to an order of magnitude smaller than the variation associated with socioeconomic

characteristics. Confident selection of the fabricated version is rare, so the main cost of an unreliable information environment may lie in the uncertainty it creates rather than in the false beliefs it instills. And because the main divide in who is informed runs along socioeconomic rather than partisan lines, inequality in engagement with reliable news, more than partisan gullibility, emerges as the pressing concern. A related question is whether readers *interpret* the news in a motivated way. Thaler (2024) finds evidence of politically motivated reasoning using a controlled experimental design that allows distinguishing between Bayesian updating and motivated reasoning.

While the question of whether readers are primarily driven by accuracy concerns or belief confirmation has received much attention in the literature on the demand for news, several important additional dimensions are worth highlighting. First, a preference for *interpretations* may move people away from the most informative sources. Bursztyn, Rao, Roth & Yanagizawa-Drott (2023) show that viewers across the political spectrum choose opinion programming over straight news even when offered meaningful incentives to learn objective facts. Second, demand for news competes with demand for entertainment, and consumers may avoid information even when it is free if they anticipate it will be unpleasant (Golman, Hagmann & Loewenstein, 2017; Prior, 2005, 2007). Third, attention itself is scarce: a complementary tradition models news demand as a costly allocation of attention (Maćkowiak, Matějka & Wiederholt, 2023; Sims, 2003). Fourth, frictions can suppress demand that would otherwise exist: Chen & Yang (2019) provide temporary free access to the uncensored internet to Chinese university students and find that access alone barely moves consumption of foreign news, whereas access combined with brief encouragement generates lasting demand, acquisition of politically sensitive knowledge, and belief change. Low observed demand for

high-quality news may thus reflect habits and unawareness rather than preferences—a theme that recurs in the evidence on behavioral frictions below.

While advances in AI might improve the matching of people's preferences to their news consumption by providing better recommendations, recent advances in generative AI also enable people to create a fully personalized news environment where they can control and customize the *framing* of the news. To study the effects of news customization, Chopra et al. (2025) create a news app where users can easily switch between different presentations of the same underlying story, including making it less opinionated, less complex, more entertaining, or changing the political perspective. By far the most popular customization is the *Facts Only* version, which strips articles of opinionated content. The option to make news politically aligned is far less popular, suggesting that many people choose aligned news primarily because they tend to trust it more. Making the news more negative is almost never used, despite evidence that negative language raises engagement when supplied by publishers (Robertson et al., 2023). The paper also establishes a large wedge in the news people consume when they can freely choose the presentation of the news and when they are exogenously assigned a particular frame, pointing to potential frictions in the absence of active choice over presentation.

Braghieri, Levy & Trachtman (2026) directly study the role of behavioral frictions in news consumption. They provide evidence that behavioral frictions significantly distort news consumption patterns. In their field experiment on Facebook, the pages users follow are more ideologically extreme and less reliable than the portfolios those same users say they want. The experiment identifies two distinct mechanisms underlying this wedge. Inertia and hassle costs discourage active revision of a portfolio once it is in place, and users systematically

misperceive the reliability of sources. Asking users to reoptimize the sources they follow persistently reduces the slant of their consumption diet. Additionally, providing information about source reliability improves portfolio quality. The results suggest that some of the consumption of extreme and low-quality sources reflects behavioral frictions rather than preferences.

An additional friction that might be important for online news consumption arises from self-control problems. In the context of social media consumption, Allcott, Gentzkow & Song (2022) estimate that self-control problems account for 31% of overall consumption, corresponding to 48 minutes per day. Users underpredict their own future consumption, and there is demand for commitment devices: some users adopt binding screen-time limits and are willing to pay to keep them. These results underscore again how engagement data might be a poor proxy for consumer welfare and preferences.

A final demand-side pattern connects directly to the engagement–welfare wedge of Section 3.3: a substantial and growing share of consumers actively avoids the news. In the 2026 *Digital News Report*, roughly four in ten respondents report often or sometimes avoiding the news, with avoiders disproportionately citing the negativity and repetitiveness of coverage (Egan et al., 2026). The declining trust in news and increasing news avoidance could reflect that many of the tactics news outlets use to increase engagement and the algorithmic rewarding of negative and sensational news content on social media contribute to declining long-run engagement with the news.

6 EXTERNALITIES AND CORRECTIVE MECHANISMS

What are the social externalities of news consumption? Such externalities predate the digital age: newspaper purchases financed accountability reporting that benefited even non-readers, and circulation shaped editorial choices. What has changed is the nature of the feedback loop. Where print editors saw only crude outlet-level circulation totals, clicks now train the rankings and analytics that determine what other readers are shown, at the item level and in real time, and readers who share content directly shape its distribution (Vosoughi et al., 2018). We organize the evidence on these externalities by who bears the resulting costs or benefits. We begin with the canonical *positive* externality—accountability reporting that benefits even those who never read it—and then turn to three negative externalities: on non-users of platforms, on the producers of original reporting, and among readers themselves. We then turn to instruments that could correct the market failures identified in this review.

6.1 The Under-Provision of Costly Accountability Reporting

Accountability reporting in the political domain provides a canonical example of a positive externality. Empirical evidence demonstrates the relevance of this mechanism for welfare: Politicians in areas with less newspaper coverage do less for their constituencies (Snyder & Strömberg, 2010) and governments respond more strongly to citizens where news reaches a larger share of the population (Besley & Burgess, 2002). Readers, however, do not take these broader benefits into account when deciding what news to consume. Under-provision can also originate on the supply side: in Besley & Prat (2006), a government can suppress unfavorable reporting by transferring rents to outlets, and doing so is cheaper when ownership is

concentrated. Thus, accountability reporting can fail even where readers would value it.

The measurement of attention at the item level may reinforce this classic under-provision problem: accountability reporting performs poorly on precisely the engagement signals on which production decisions increasingly rely, even though readers' willingness to pay for it is high. When revenues fall, newspapers consequently may cut investigative and local reporting more strongly than segments that yield stronger engagement, such as sports and entertainment. The consequences of under-provision are increasingly documented directly. Newspaper closures have been linked to higher municipal borrowing costs, in line with weakened monitoring of local government (Gao, Lee & Murphy, 2020).

6.2 Externalities on Non-Users

As news consumption and political discussion migrate to a platform, people not on the platform may miss timely information and find it harder to participate in shared conversations. This can result in a collective trap: in the presence of negative non-user externalities, individuals prefer participation to exit even if they would prefer the platform not to exist (Bursztyn, Handel, Jiménez-Durán & Roth, 2025b). Platforms can deliberately engineer more negative non-user externalities, for example, by giving prominence to trending topics and peer activity, or by making some posts available only for a limited time (Bursztyn et al., 2026a). Engagement therefore overstates the social value of the marginal platform reader in two distinct ways: the reader's own surplus may be negative, and the participation that generates that engagement raises the cost of staying out for non-users, further increasing their incentive to join the platform. Standard corrective tools struggle with these non-user

externalities, a point we return to in Section 6.5.

6.3 Externalities on Other News Producers

Moving upstream from consumers to firms, news production from one media company can be an input into the products of other firms, e.g., news aggregators. Original reporting carries high fixed costs, but firms that aggregate or repackage it need not contribute to its production, creating free-rider incentives (Hamilton, 2004). Whether aggregation harms producers on net is unclear, since aggregators may also increase demand by directing readers to outlets they would not otherwise visit (Athey, Mobius & Pál, 2021; Calzada & Gil, 2020; Chiou & Tucker, 2017). Generative assistants may be less favorable for original news producers on this margin: since the reader's question is resolved by the answer, readers may be less likely to click the original source link from the news producer.

The externality specific to generative assistants operates, most plausibly, through selection in the content that is withdrawn: because the publishers who restrict AI crawlers are disproportionately the largest and more factually reliable ones, the composition of the material available to assistants deteriorates, and the displaced referral traffic concentrates among the largest remaining outlets (Zhou et al., 2026). In equilibrium, insufficient referral traffic from the AI intermediary can render costly content production unsustainable altogether (Chan, 2026). Beyond these market-structure effects, AI-generated content itself imposes an externality on producers: an intervention teaching readers to identify AI-generated images lowered trust in news generally, including in outlets that had no part in producing such content (Campante, Durante, Hagemeister & Sen, 2025).

6.4 Externalities among Readers

Digital technologies use the behavior of one reader as an input to determine the supply of news another reader encounters. Algorithms allocate the scarce positions in feeds and on front pages. Therefore, the marginal click co-determines what others are shown. Personalization thus erodes the common audience through which broadcast media once moved public agendas and created common knowledge (Sunstein, 2001), and engagement maximization tends to privilege communication among users with similar worldviews (Acemoglu, Ozdaglar & Siderius, 2024). Moreover, user-generated content and its sharing on social media impose direct non-pecuniary externalities on other users of the platform, potentially shaping their attention, beliefs, and behaviors.

Whether fragmented exposure shapes beliefs is a separate question. Earlier estimates suggest that segregation in exposure was modest. The standard measure, the isolation index, captures the difference between the average conservative's and the average liberal's share of exposure to conservative outlets. By this measure, online news scores roughly 0.08, and Facebook between 0.17 and 0.25—higher than most offline media, but well below face-to-face networks (Gentzkow & Shapiro, 2011; Levy, 2021). These estimates largely predate the shift to fully algorithmic ranking and may not adequately characterize the current news environment. More recent platform-based evidence instead documents high and asymmetric segregation, including a segment of the news ecosystem consumed almost exclusively by conservatives (González-Bailón, Lazer, Barberá, Zhang, Allcott et al., 2023). Yet observed segregation should not be attributed to ranking alone: when cross-cutting exposure is measured at the outlet level, users' choices about what to consume restrict it more than feed ranking does (Bakshy,

Messing & Adamic, 2015).

Interventions that change algorithmic curation sometimes move beliefs less than one might expect. Many of the interventions reviewed in Section 4.3 show that removing reshares, reducing like-minded exposure, and replacing algorithmic with chronological ranking on Facebook all alter exposure substantially without consistently changing polarization (Guess et al., 2023a,b; Nyhan et al., 2023). At the same time, other algorithm interventions find significant effects (Gauthier et al., 2026; Levy, 2021), and an important question for future research is to better understand how and when algorithmic curation affects beliefs, policy views, and polarization. More sustained changes in news sources can matter: paying regular Fox News viewers to watch CNN for a month increased political knowledge and moderated several attitudes, although the effects largely faded after the intervention ended (Broockman & Kalla, 2025). Both deactivation studies and research studying the withdrawal of political advertising document relatively muted effects on knowledge, polarization, and turnout (Allcott, Gentzkow, Levy, Crespo-Tenorio, Dumas et al., 2026; Allcott, Gentzkow, Mason, Wilkins, Barberá et al., 2024). This is in line with the modest persuasion rates documented for media generally (DellaVigna & Gentzkow, 2010), though well-identified exceptions exist in which slanted outlets shifted votes (DellaVigna & Kaplan, 2007; Enikolopov, Petrova & Zhuravskaya, 2011; Martin & Yurukoglu, 2017).

Behavior can change even where measured attitudes do not, and these effects fall partly on people who are not platform users at all. Anti-refugee incidents increase with local Facebook use and fall during outages (Müller & Schwarz, 2021), inflammatory elite messages predict anti-minority violence (Müller & Schwarz, 2023), and social-media access shifts electoral margins (Fujiwara, Müller & Schwarz, 2024).

Limited persuasion, moreover, does not imply limited political consequences, because media can affect politics by changing which issues are salient (Prat, 2018). Agenda setting also closes the loop back to supply, since audience attention feeds into what politicians talk about—and because political agendas are non-excludable, this channel affects viewers and non-viewers alike. The mechanism rests on an asymmetry of objectives: a media firm maximizing audience size values a viewer drawn from entertainment and a viewer drawn from another outlet equally, whereas a politician maximizing vote share values a voter poached from an opponent twice as much as a mobilized nonvoter (Noy & Rao, 2026). Media firms therefore emphasize topics that mobilize marginal audiences, while politicians emphasize topics that change relative support. Consistent with this, Noy & Rao (2026) document that cable news devotes roughly half of its issue content to culture, whereas political advertising is dominated by economics; in household-level viewing data, cultural content is more effective at mobilizing viewers who might otherwise watch entertainment, while economic content better retains viewers who might switch to rival news. Politicians respond in turn: they estimate that greater cable news viewing raises the stated importance of cultural issues relative to economic issues, using quasi-random channel positions.

6.5 Correcting Externalities with Content Moderation and Regulation

One set of interventions to mitigate the externalities among readers leverages content moderation, which targets harmful content directly by removing or demoting it. When hateful posts on Twitter are reported and removed, their authors carry on much as before, but the users those posts attacked become about 13% more active (Jiménez-Durán, 2023). Content modera-

tion also reduces toxic posting by users who see their posts removed (Beknazar-Yuzbashev, Jiménez-Durán, McCrosky & Stalinski, 2025).

The limits of these instruments are their scalability and speed. Community Notes reduce the spread of the posts they annotate by about 61%, but they arrive late, so engagement with the annotated content across the platform as a whole falls by no more than roughly 15% (Chuai, Pilarski, Renault, Restrepo-Amariles, Troussel-Clément et al., 2026). Regulation that binds all platforms simultaneously can have larger effects: Germany's Network Enforcement Act, which bound every major platform at once, lowered online toxicity alongside a decline in offline hate crime (Jiménez-Durán, Müller & Schwarz, 2022).

While these papers credibly estimate effects on moderated content, overall welfare depends on the information environment as a whole, and moderating some content can change how the remaining content is produced and perceived. For example, labels on some false headlines raise the perceived accuracy of unlabeled ones (Pennycook, Bear, Collins & Rand, 2020). Moderation organized around a falsehood threshold can also miss the larger exposure margin: unflagged vaccine-skeptical content had an estimated aggregate effect on vaccination intentions that was 46 times larger than that of content flagged as misinformation, because aggregate exposure to it was much greater (Allen, Watts & Rand, 2024).

A second regulatory margin targets ranking algorithms rather than individual pieces of content. The European Union's Digital Services Act requires very large platforms to assess risks arising from their recommender systems, to disclose their main parameters, and to offer users a feed option not based on profiling. The experimental evidence in Section 4.3 suggests that such feed choice targets the binding margin, but also cautions against optimism: few users switch voluntarily, and prior algorithmic exposure persists after switching (Gauthier

et al., 2026). Moreover, non-user externalities resist standard instruments: when participation is driven by the cost of staying out, corrective taxes may fail (Akerlof, Holden & Thornton, 2026b; Bursztyn, Handel, Jiménez-Durán & Roth, 2026b). This suggests that regulation may need to target the design features generating the externality, such as engagement-based ranking itself (Bursztyn et al., 2026b).

Regulators have also targeted the terms of trade between platforms and publishers, motivated by the market power a few platforms hold over producers' access to consumers' scarce attention (Prat & Valletti, 2022). Bargaining codes such as Australia's News Media Bargaining Code compel platforms to pay for news content, while licensing agreements between publishers and AI firms implement the same split privately.

6.6 Correcting the Private Wedge: Alternative Objectives

Could news outlets and platforms increase consumer welfare by maximizing a different objective? An algorithm predicts behavior, such as clicks, but what is actually more relevant for understanding welfare is the mental state that produced the behavior. That mental state, however, remains unobserved (Kleinberg et al., 2024a).

The obvious response to this identification problem is to optimize against alternative proxies for welfare, such as self-reported consumer satisfaction. Some production systems already do exactly this, ranking on predictions of engagement and satisfaction together. Experiments suggest higher satisfaction under the combined objective (Christakopoulou, Traverse, Potter, Marriott, Li et al., 2020; Christakopoulou, Xu, Zhang, Badam, Potter et al., 2021). These experiments leave open the question of whether satisfaction is actually a good

welfare measure, how heavily firms weight it, and whether the gains are persistent.

Two distinct problems limit the use of satisfaction as an objective. The first concerns its validity. A response to a survey item is itself a function of the same unobserved mental state that produced the click. Moreover, surveys face well-known challenges: answers are ordinal and subject to framing effects and social desirability bias (Bursztyn, Haaland, Röver & Roth, 2025a). The second problem is that surveys are costly to field, reach only a small, selected share of users, and the results only become available with a lag, making them irrelevant for real-time engagement optimization. The second problem is critical for determining what firms actually optimize. The signals that are easy to collect at scale are also biased, while signals more plausibly related to welfare are expensive and arrive with a lag.

Which signals that a firm could measure are plausibly more reliable metrics of consumer welfare, and can any of them be collected at scale? Candidate signals can be ordered by the degree of deliberation they require of the reader. Labels require the least: they change the consideration set when consumers choose rather than the object the firm maximizes. Reliability information improves the portfolios of sources that users assemble (Braghieri et al., 2026), while credibility labels have limited average effects on what is consumed (Aslett et al., 2022). Forcing a choice may dramatically change what kind of news people consume (Chopra et al., 2025).

Two further signals ask more of the reader, as they involve real stakes and are scarcer. Renewal and paywall decisions are deliberate. Recent evidence suggests that these deliberate choices correlate only weakly with standard engagement metrics (Martin et al., 2026). Yet, even field measures of subscription renewals are confounded by features that aim to increase behavioral frictions, such as automatic billing and cancellation hassle. An alternative option

is asking readers to re-optimize the algorithm or its inputs directly (Braghieri et al., 2026).[2]

As discussed in Section 4.4, generative models could relax this trade-off by lowering the cost of evaluating and filtering content. Whether firms would adopt any of these alternatives is a separate question: Chopra et al. (2025) observe satisfaction gains but no increased consumption, while Beknazar-Yuzbashev et al. (2025) find that hiding toxic content reduces engagement.

7 CONCLUSION AND RESEARCH AGENDA

This review examines how improved measurement of engagement with individual news items affects the news market when that engagement can be monetized through advertising. We first show that this gives news producers and distribution platforms an incentive to maximize consumer engagement. Generative AI, which makes personalization much cheaper, likely further enhances such engagement maximization.

The welfare implications of these technological trends and the implied optimization of short-run engagement are not straightforward. Our reading of the evidence is that engagement maximization can lower welfare outright as short-run engagement can be negatively related to reader satisfaction. When short-run engagement reflects a better match to own preferences, it could increase welfare by reducing search costs.

Better welfare measurement will not by itself answer the remaining questions. Firms observe clicks, viewing time, and sharing in extraordinary detail, while learning much less about long-run engagement and willingness to pay for subscriptions. Signals more plausibly

[2]For example, X and Instagram let users switch off algorithmic ranking in favor of a chronological feed, while Bluesky goes further and lets users subscribe to competing ranking algorithms supplied by third parties.

tied to user valuations, satisfaction, and choices made with fewer behavioral frictions involved are collected less often and rarely studied together. Research, therefore, needs to establish both which measures are informative about actual welfare and when firms have reason to use them.

An important frontier topic is better understanding which kinds of content consumers truly value and which they regret consuming. Existing evidence is thin: investigative and local reporting are valued well above what engagement measures imply (Martin et al., 2026), but whether this gap extends to other content categories remains open. Experiments could elicit incentivized valuations for different types of content, which could then be benchmarked against the engagement metrics available for those content types.

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