Protecting Journalism in the Age of Digital Platforms

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George J. Stigler Center for the Study of the Economy and the State

The University of Chicago Booth School of Business

Committee for the Study of Digital Platforms

Media Subcommittee

Report

01 July 2019

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EXECUTIVE SUMMARY

While the Internet has contributed immensely to access to and diffusion of information and has opened numerous opportunities to improve life across the globe, it has also brought challenges, risks and harms that may endanger the very democratic and liberal order that many believed it would advance.

Perhaps nowhere are these contradictory trends more present than in the fourth estate—the news media and journalism. The technology that made news creation and diffusion cheaper and faster and gave billions of people a voice has also become a tool used by state and private powers to manipulate and propagate disinformation and hate. It has also disrupted the business model of original news creators, disintermediated them from their consumers and created a new news ecosystem.

Growing concentration in the business sector in the US and the accumulation of market and political power by large corporations across the developed world has attracted more scrutiny in the last decade. It is now clear that the natural tendency toward concentration in modern capitalism is magnified in digital markets, where a handful of corporations enjoying network effects today exercise more power and influence globally than any other private entities have in the last century. Two of those companies—Google and Facebook—are not only giant economic players that have changed most industries, but are also the largest media companies in history. While they maintain that they are technology companies, they not only have unprecedented influence on news production, distribution and consumption, but also are rapidly changing the incentives, behavior and norms of all players in the news media ecosystem.

Headlines evoking a "crisis in the news" and "crisis in journalism" have appeared for more than a decade. To be sure, media scholars and practitioners have described journalism and the news industry in crisis terms time and again in history, mostly after technological shocks. This report does not adopt a crisis narrative. Rather, it soberly reckons with an era of profound change. We believe that changing technologies always warranted updates to the laws and regulations that shape news media. The digital revolution and ascent of dominant digital platforms call for a significant renewal of the rules in this important sphere again.

We demarcate two periods in the digital revolution with regard to its impact on the news ecosystem: the first two decades of the spread of the Internet, and the last decade, characterized by the rise of a handful of digital platforms. Technology had a profound influence on journalism and the news in both periods, but there are important distinctions between the two. The first twenty years after the invention of the World Wide Web saw a dramatic decline in the cost of information distribution and an increase in information accessibility. The news industry had to adjust to advertising and readers shifting to the digital world, which caused a decline in revenues and profitability and the loss of the important business of classified ads. The last decade has seen still more advances in technology, but with a growing share of digital activity and news consumption moving to digital platforms. This decade has been characterized by a profound influence of the platforms on the relationship between news producers and the public and on the very nature of the public sphere.

The introduction of new technologies to mass media has always had an influence on the character of news, politics and society. From the printing press and telegraph to radio, television and cable television, each technology brought opportunities and challenges and in turn public demand for new laws and regulations. The challenges brought by the platforms run deep: unbundling of news products; personalization and targeting tools unprecedented in their sophistication and precision; and atomization of the news media. Together these trends have created a new ecosystem of news consumption, more complicated and fragmented than ever—and most importantly—split into billions of individual "feeds" and "editions" for each user.

The news media and journalism are broad subjects with many categories and definitions. This report is focused mainly on what we think is the most important for the functioning of democracies: accountability and investigative journalism. This type of news gathering, investigation and analysis reveals information that is crucial for readers as citizens, and information that powerful actors like to be concealed. Hence, it produces not only private benefits for the consumer but also positive externalities benefitting society at large.

While the authors of this report do not believe that there was ever a "golden age" of quality, independent journalism that can be revived, we believe that digital platforms present formidable new threats to the news media that market forces, left to their own devices, will not be sufficient. In the report we review some of the main market responses that try to improve the sustainability of independent journalism, their contributions and their shortcomings.

Our report is based on the assumptions that independent journalism is a crucial pillar of democracy, but that the production of investigative and accountability journalism was always underfunded and underproduced by the market—as original producers of this kind of journalism can at best capture only a small fraction of the benefits to society.

The report identifies four areas of immediate concern to the news media:

1. The gradual decimation of the business model that enabled many news outlets to produce accountability and investigative journalism for decades. Especially acute is the collapse in revenues of local news outlets and the closure of such news outlets across the developed world.
2. The shift in news distribution from the traditional news organization to algorithms controlled by digital platforms and the growing concentration, power and control that a handful of these platforms have as gatekeepers of the news across the globe.
3. The opacity of the algorithms that control news distribution and the lack of publicly available information on news consumption in the platforms' ecosystem.
4. The weak economic and legal incentives that these powerful gatekeepers of the news have to prioritize quality content and limit false information.

While the threats to quality news ecosystems are significant, this report does not recommend direct intervention in the management of the platforms and their relationship with users and news producers. Because a handful of platforms exercise gatekeeping power over information, regulatory intervention must be very careful not to put even more power in the hands of those platforms. Any state or regulatory intervention should be measured and limited.

Our policy recommendations are limited to topics that directly relate to the news. Yet they should be read together with the policy recommendations of the subcommittee on market structures listing proposals meant to increase competition in the digital world, give users more power and control over their data and limit the market power of the platforms and their ability to entrench their dominant market position. The subcommittee members think that opening platforms for competition through interoperability, giving users ownership of their data, and the potential breakup of platforms may contribute to reducing the gatekeeping power of these platforms and positively impact the type of information that users consume.

The dramatic shift of advertising dollars from traditional news outlets to a handful of digital platforms has many stakeholders in the news industry calling for regulatory intervention to reverse or halt this trend. This report takes a different approach: we do not focus on finding ways to return to a "glorious" past when a larger share of advertising was allocated to traditional news outlets.

The report's starting point is that the marriage between quality accountability journalism and advertising revenues was always fraught with conflicts of interests, biases, battles for attention and challenges to the autonomy and integrity of news organizations. A large body of research, evidence and surveys documents the influence of advertisers on the agenda, content and framing of reporting, and direct and indirect bias, censorship and self-censorship caused by dependence on advertising. There is also evidence of biases and distortions in news reporting in the pre-platform era caused by ownership and control of news outlets by tycoons, oligarchs and politically connected business groups. The shift of readers to the Internet and the rise of digital platforms have exacerbated these biases as the business model of many news outlets collapsed; publishers became more dependent on a few large advertisers, and newsrooms were presented for the first time with granular real-time data on the virality of single stories—which enabled them to adopt editorial strategies that market single stories instead of full editions.

Reversing the shift of advertising dollars from the digital platforms back to traditional media may not only prove to be like swimming against the stream—it may further incentivize news outlets to chase clicks and virality. In the race to get more clicks and exposure through the sophisticated, targeted, personalized, advertising-maximizing digital platforms, publishers may give the platforms more power and editorial sway in the curation of the news. Nevertheless, they will always trail behind platforms in the competition to monetize those clicks, as they will find it difficult to compete against the vast data troves and artificial intelligence capabilities held by giant tech companies.

This report sees the seismic shift in the advertising dollars to the online world as an opportunity to create a news ecosystem supported more by paid subscriptions and public funding, and less by advertising. The report does not seek to protect, subsidize or prioritize existing news outlets, but it does assume that journalists will continue to play a central role in production of accountability journalism.

Our main policy recommendations are as follows:

1. Introducing some public funding for news organizations, relying on citizen choice, to support journalism. The allocation mechanism of the funds should be designed to promote competition and entry and limit the entrenchment of incumbent large news media outlets. The funds should be allocated directly by the citizens, independently of any government intervention. Special consideration should be given to the funding of local journalism, where we see most of the aforementioned problems concentrated today. This funding mechanism is highly cost effective: $50 per US adult is likely to be sufficient.
2. All mergers and acquisitions involving news companies should be subject, in

addition to the standard antitrust review, to a news plurality review. Standard competition policy protects direct consumer welfare, and therefore does not take into account the indirect effect that excessive media concentration can cause on citizen welfare. We propose an approach to quantifying news plurality that is neutral to the identities of the owners of the merging entities and to the platform on which news content is delivered. The proposed approach, based on attention shares, has been used in a recent merger decision in the UK.

3. Developing a new regulatory system that will ensure necessary transparency regarding information flows and algorithms. This can be done through a new regulatory framework and oversight body that sets standards for the disclosure of information and news sources, develop source-based reputational mechanisms and bring to light biases and choices in editorial decisions and algorithms for the presentation of the news. These regulators should produce periodical reports on news consumption and the influence of algorithm design on the distribution of news and the behavior of users.
4. Digital platforms enjoy a hidden subsidy worth billions of dollars by being exempted from any liability for most of the speech on their platforms (Section 230). We do not propose to repeal Section 230 but rather propose that platforms that would like to enjoy this protection should have to agree to take clear measures to prioritize content according to criteria other than the maximization of ad revenue.

The pace of change brought by the Internet is unlike any previous technological shock. The proposals in this report aim to address the main threats we see today to the news media ecosystem, but are far from offering complete solutions to an ecosystem that is changing every year. We believe that after rolling out the main policy recommendations above—additional public funding of journalism, disclosing the vast data that platforms have on news consumption, and taking steps to limit excess concentration of political power by tech and media players—experts, regulators and legislators will be equipped with much more information that will enable us to consider further updates to the regulations governing the news media.

Amid growing threats to democratic values and institutions across many liberal democracies around the globe, a bold plan for strengthening independent, strong and rigorous accountability journalism is needed more than at any time since the dawn of the modern liberal democracies.

REPORT FROM THE MEDIA SUBCOMMITTEE

Were it left to me to decide whether we should have a government without newspapers, or newspapers without a government, I should not hesitate a moment to prefer the latter.
—Thomas Jefferson

Nothing but a newspaper can drop the same thought into a thousand minds at the same moment. . . . To suppose that they only serve to protect freedom would be to diminish their importance: they maintain civilization.
—Alexis de Tocqueville

There is not a crime, there is not a dodge, there is not a trick, there is not a swindle, there is not a vice which does not live by secrecy.
—Joseph Pulitzer

Journalism is printing what someone else doesn't want printed: everything else is public relations
—George Orwell (attributed)

What is a democracy? The fundamental principle of our modern political system is "one person, one vote." We believe it should be "one *informed* person, one vote." Hence free, unbiased, high-quality information is indispensable to democratic debate, institutions and processes. It matters for the quality of elections and the accountability of elected representatives. Journalism, by revealing previously undisclosed information, plays a crucial role in combating and reducing corruption and holding the powerful to account, and is also central to the proper functioning of markets and governance of firms.

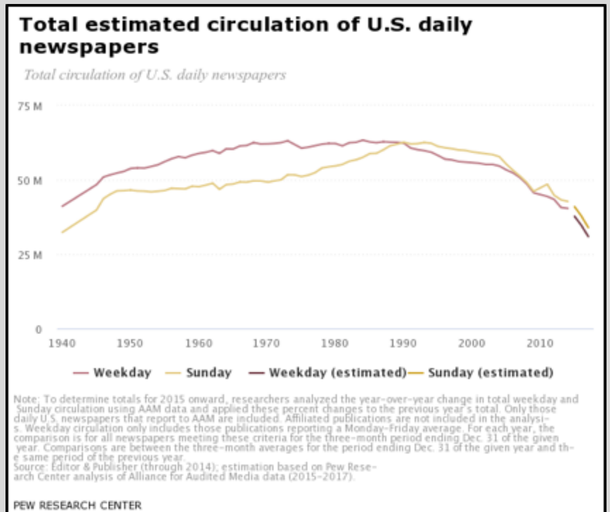
With the rise of the Internet, information has become more accessible to the public around the world. The Internet gave voice to hundreds of millions of people and enabled them to connect, come together and form digital communities and networks to express their shared interests. However, as accessing information has become easier for the public, there has been an explosion in information, and organizing and filtering it has emerged as a major challenge. Up until a decade ago, it was mostly agreed that the benefits of the digital revolution were significantly higher than the negative impact. But with the rise of the dominance of the digital platforms, we are gradually shifting to a network architecture that consolidates much of the power, activity and resources on the Internet in a handful of platforms—a situation that calls for rethinking the rules of the game in the news media and on the Internet.

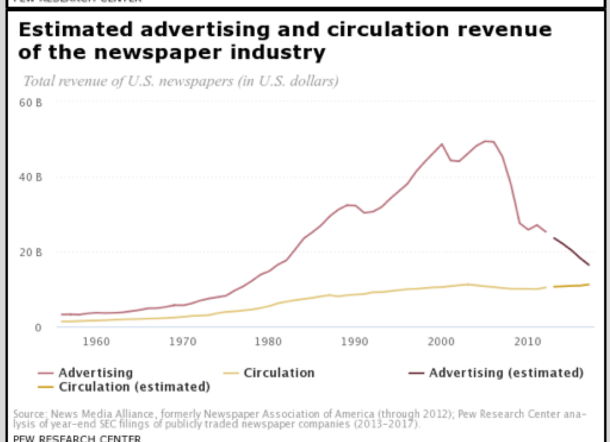
Production of high quality news with journalistic rigor has always been costly. While there are large public benefits from news production, the private benefit for news producers has been limited. Traditionally, journalists at news media organizations did the job of producing original reporting, and editors bundled this information into news editions for the public. Classified and display advertising and subscriptions were the primary ways of sustaining the traditional business model. After their rise, digital platforms such as Google and Facebook emerged as organizers and bundlers of information. They aggregate content from original information producers such as news media companies and bundle this information as curated "feeds" and search results to users. A rising number of users, especially those who are young, get most of their news directly from social media feeds. The disintermediation between readers and original news producers has disrupted the way in which news is produced, organized and consumed in the digital age.

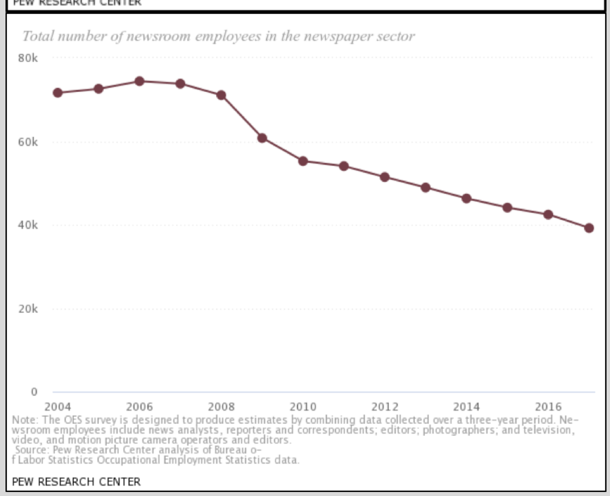
Digital platforms, and the Internet more generally, have disrupted the advertising market for media outlets. Traditionally, classified and display advertising was the major source of revenue and profitability for newspapers. In the 1990s, the entry of online marketplaces like Craigslist in the United States was disruptive to the classified advertising market and led to an increase in subscription prices of newspapers and a decline in their readership.[3] Likewise, with the loss of classified advertising and the associated increased reliance on print advertising, there was an increased bias in news reporting toward these advertisers.[4] Separately, there has been a reduction in demand for print newspapers among readers due to the availability of digital news and the consumption of news via social media platforms. That this is especially true among young individuals suggests that this trend will only accelerate in future years.

Box 1: Decline of Newspapers in Numbers

The overall circulation of newspapers has declined since the 1990s with the rise of the Internet in the US. Advertising revenue especially plummeted after 2008, when the fallout from the financial crisis and the rise of digital platforms coincided. The industry did not recover from this decline in advertising revenue, and growth in circulation revenue was too slow to arrest overall revenue decline. A decline in revenues and circulation has led to a loss of newsroom employment, a critical measure of journalistic depth that has declined in the US over time.



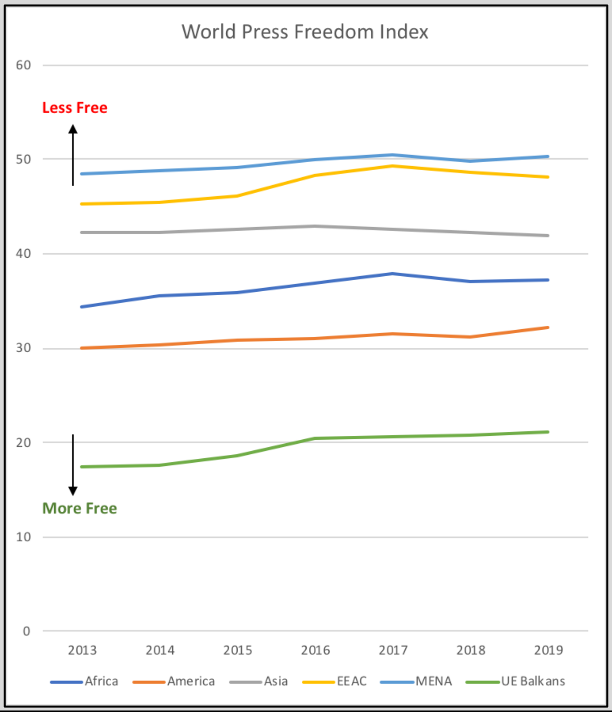




[3] Seamans & Zhu (2013).

[4] Beattie et al. (2018).

Not only have newspapers declined; press freedom is also under threat around the world, as indexed by the World Press Freedom Index.



Taken together, the reduction in demand on both sides of this market—from paying readers and from advertisers—has put severe financial pressures on traditional media outlets. Since 2007, while digital platforms like Facebook and Google grew exponentially, the advertising revenue of newspapers has dwindled, leading to severe financial strain and a sharp decline in newsroom employment. This disruption of the financing model might also have changed the mix of local versus national news. Given that digital platforms (Facebook, Twitter, Google, etc.) have national distribution, there is a concern that local news has been crowded out in favor of national news. This is consistent with the conjecture that the Internet, and communications technology more generally, may lead to a "death of distance," that is, the overcoming of physical distance and a new ability to connect more isolated areas to less isolated ones. This is consistent with evidence the other settings: The introduction of television in the US led to a reduction in local newspaper circulation, and the entry of the *New York Times* into metro areas led to reductions in local newspaper readership.[5]

These issues are particularly acute for newspapers that have traditionally served local markets. Since 2004, 1,800 papers have closed in the US. Six percent of US counties currently have no newspapers, and an additional 46 percent have only one newspaper, usually a weekly. Over one-half of counties are not served by a daily newspaper. A similar trend is seen in democracies like Australia, where the number of journalists in traditional print industries fell by 20 percent from 2014 to 2017, and among regional publishers and broadcasters cost-reduction measures range from the closure of newspapers to the consolidation of broadcasting operations. Similarly, in the UK, 321 local press have seen closure in the last ten years.[6]

This decline in the number of newspapers has reduced the degree of competition in local news markets, in terms of both readership and advertising. This is in contrast to the promise of digital platforms, which had the potential to reduce barriers to entry and facilitate the sharing of information. Instead, by disrupting newspaper advertising markets and shifting demand from print to digital sources, platforms have reduced pluralism and increased concentration in local newspaper markets.

The loss of local newspapers and the emergence of "news deserts" has important consequences for local governance. For example, local newspaper closures between 1996 and 2015 in the US led to higher borrowing costs for municipalities in the long-

[5] Gentzkow (2006), George & Waldfogel (2006).

[6] http://newspaperownership.com; Wilding et al. (2018); Cairncross (2019)

run, even in localities with high Internet usage, as local governments were held less accountable for their public financing decisions.[7] Similarly, a study of newspapers in California found that when there are fewer reporters who cover an area, fewer people run for mayor, and fewer people vote.[8] In other words, a decline in local journalism due to the emergence of digital platforms can have far-reaching consequences for politics and the economy. Again, these findings are in line with evidence from other settings. The introduction of television in the US, for example, led to a reduction in political knowledge and voter turnout.[9] Similarly, increased newspaper coverage of local Congressional representatives is associated with better informed constituents and enhanced representation.[10]

Taken together, the demise of local newspapers, along with evidence on their social benefits, suggests significant challenges for local governance in coming years. While the aforementioned evidence is not directly linked to digital platforms, there is also some direct evidence that the entry of the Internet and digital platforms has displaced traditional media outlets and the associated news coverage, including investigative journalism, and changed political outcomes.[11] For example, the rollout of the Internet in Germany led to a reduction in voter turnout, and researchers[12] attribute this effect to a reduction in television viewership following broadband Internet availability. Studying the rollout of broadband Internet in Italy, researchers[13] documented an initial reduction in voter turnout followed by a later increase as parties harnessed this new technology. In a recent study, researchers[14] have found that broadband development in the UK has displaced other traditional media with greater news content such as radio and newspapers, and has also decreased voter turnout. This effect, which is most pronounced among the less educated and the young, also leads to lower local government expenditures and taxes, particularly expenditures targeted at less-educated voters. Taken together, emerging evidence suggests that the entry of digital media has displaced, rather than enhanced, traditional news reporting in these areas, leading to reductions in voter turnout and changes in policy outcomes.

While digital platforms' dominance is a relatively new phenomenon of the last decade, it is important to remember that news media have long been ridden with market and non-market forces that subverted and biased their reporting. Political parties, governments, advertisers, large corporations, funders, and audiences are a few of the forces that influenced news media. At the cusp of the twentieth century, advances in technology gave rise to greater independence of news media, as they were able to produce and transmit news at a much lower cost, and led to a shift from partisan to professional journalism.

With the rise of digital platforms, the cost of distributing information went down, which increased the entry of new information producers and increased diversity of voices. Digital platforms became powerful intermediaries between original information producers and readers and unbundled and "atomized" news. They use algorithms to curate personalized content for users based on

[7] Gao, Lee & Murphy (2018).

[8] Rubado & Jennings (2019).

[9] Gentzkow (2006).

[10] Snyder & Stromberg (2010).

[11] Falck, Gold & Heblich (2014); Gavazza, Nardotto & Valletti (2018).

[12] Falck et al. (2014).

[13] Campante, Durante, & Sobbrio (2017).

[14] Gavazza et al. (2018).

the unprecedented level of data these platforms have over each individual's private history and preferences. With billions of users, they can thus create billions of "bundles" or editions of news stories with the objective of maximizing advertising revenues. These algorithms are opaque, and while platforms know exactly which individuals are exposed to which stories and why, publishers and the public have very little knowledge about such information. This gives rise to a huge asymmetry between the data and knowledge that the platforms and the public have on news consumption.

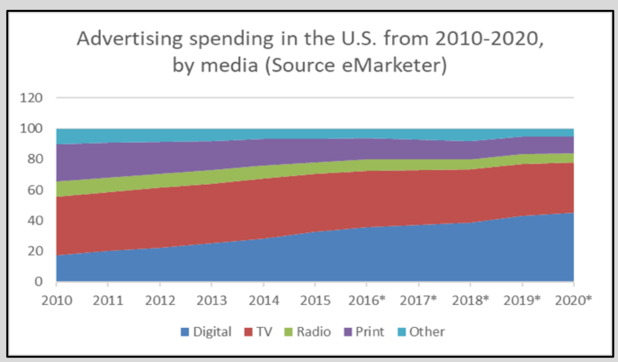
Along with atomization of news, platforms have—through their sheer size and market share as curators and aggregators—acquired unprecedented gatekeeping power over news media outlets all over the world, wielding a huge influence on the version of reality that readers see.

As noted above, traditional media were always plagued with biases, and chased attention to get advertising dollars. But those incentives were disciplined partially by reputation concerns, professional norms, and legal liabilities. Digital platforms, in contrast, are not disciplined by such forces. They are protected from most legal liabilities, and their reputation is not tied directly to the content they present as feeds to their users.

Recent research and multiple investigations by news organizations[15] support the assertion that platforms do not have incentives to prioritize quality content. A recent study found that disinformation can spread faster than true news on social media such as Twitter.[16] Not only are users not good at distinguishing reliable and unreliable news; digital platforms at the same time have access to private information about users, enabling them to selectively target visceral, addictive and at times extremist content. This, coupled with the fact that digital platforms are not held accountable for the published content, has made digital platforms powerful tools of influence, having insight into people's private behavior, but enjoying immunity from any consequences.

Box 2: Rise of Digital Platforms in Numbers

The revenue growth of digital media is nothing short of spectacular, as evidenced by the market valuations of companies like Alphabet. The share of advertising attributable to digital advertising has roughly doubled since 2010. In 2018, the share of digital advertising (38 percent) was higher than the advertising shares of television (34 percent) and newspapers and magazines (12.2 percent), and it is projected to keep growing in the coming years. Within the digital platforms, advertising revenue is highly concentrated, with two companies controlling over half of it. In particular, in 2018, Google had a 37.1 percent share and Facebook had a 20.6 percent share. Assuming that these trends continue, as predicted, the degree of concentration in advertising markets will dramatically increase in the coming years.



[15] https://www.theverge.com/interface/2019/4/3/18293293/youtube-extremism-criticism-bloomberg

[16] Cagé & Mazoyer (2019).

News Consumption by Media

How many people get their political news from a digital source? The table below shows that the share of Americans who report regular use of the digital platform is large and increasing. Similar patterns are observed in virtually every democratic country in the world. However, the table also shows that television is still the dominant platform for news. These aggregate shares also hide enormous heterogeneity. Television is four times more popular among older adults than among younger adults, and social media consumption is much more popular among younger adults.

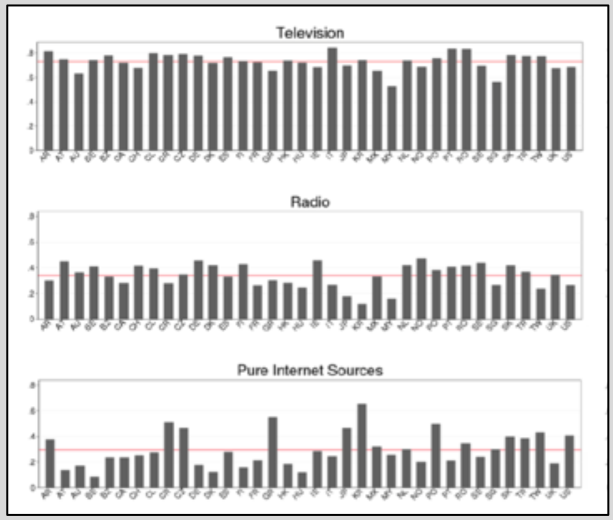
Share of US Adults Who Get News Often on Each Platform

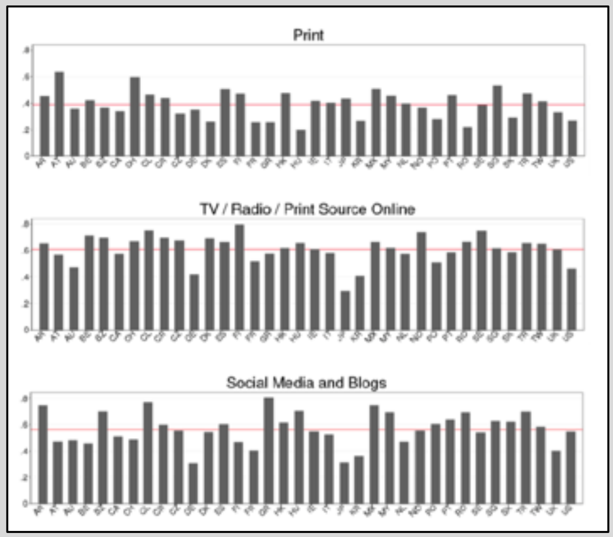
	TV	News website	Radio	Social Media	Print Newspapers
2016	57%	28%	25%	18%	20%
2018	49%	33%	26%	20%	16%
2018 age 18-29	16%	27%	13%	36%	2%
2018 age 50-64	65%	28%	28%	14%	18%

Source: Pew Research Center

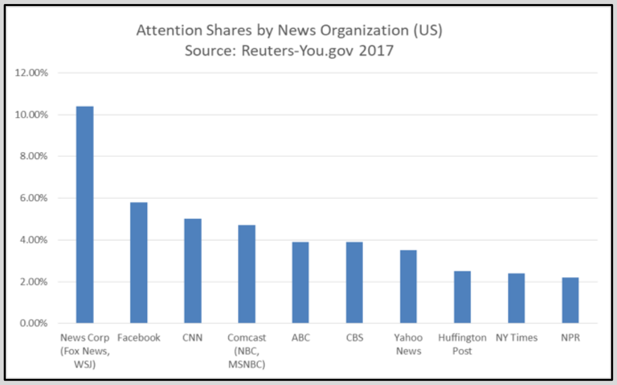
News Consumption by Source

A robust pattern observed in data is that a large share of digital news is actually the online version of traditional media, highlighting that news producers still continue to work in traditional media. The table below covers 36 countries. It shows penetration shares for traditional channels (TV, radio, print) as well as digital media disaggregated by whether the user is viewing a pure Internet source (e.g., *Huffington Post*), a social media or blog platform (e.g., Facebook) or the online version of a TV, radio or print source. As we can see the last modality is more prevalent in most countries.





Three pure digital platforms appear among the top ten US news providers in terms of attention share: Facebook at #2, Yahoo News at #7, and *Huffington Post* at #8. Only the last one produces original content. In the UK, three digital platforms are found among the top ten news organizations: Facebook at #3, Google at #5, and Twitter at #10. Indeed, similar patterns emerge in the 36 countries for which data are available.[17] Facebook is by far the dominant pure-digital news source, although it is critical to highlight that Facebook is an aggregator and not a producer of original content. It is among the top three in 14 of those countries.



Summary of Findings

The media landscape is fast-changing. Available evidence indicates the following patterns:

- The share of advertising revenues going to digital platforms is large and increasing. Facebook and Google receive over half of it.
- Television is still the dominant news medium, though the role of digital news is increasing and already dominant in younger generations.
- Although news may be delivered digitally, the content is most likely to come from traditional print and television providers.
- Among the pure-digital news providers, Facebook is by far the dominant player.

The concern with harmful externalities of concentration of power and biases in the news media related with the emergence of new technology is by no means a new phenomenon. Throughout history, such concerns have been answered with new regulations. For example, with the development of radio, the Federal Radio Commission was founded in 1927 in the US, which evolved into the Federal Communications Commission (FCC) in 1934. As media technology evolved, FCC regulations evolved, too, including the 1941 National TV Ownership Rule, the 1970 Radio/TV Cross-Ownership Restriction, and the 1975 Newspaper/Broadcast Cross-Ownership Prohibition. These regulations attempted to prevent the concentration of ownership of news media in order to support diversity in the market for ideas. As Internet and digital platforms have disrupted the media industry, we have reason to believe that government should again look into the ways in which the negative externalities of the media can be constrained.

The influence of the digital platforms on the news media has been under increased scrutiny and focus since the last US presidential elections, yet much of the focus has been on fake news and the interference of foreign governments in elections through such platforms. But the influence of digital platforms on the news and journalism ecosystem goes much deeper than just the spread of fake news. The business model of news has been severely disrupted by the rise of digital platforms, and news production and consumption have been disintermediated. The business model disruption has reduced the incentive to produce original reporting, and the platform algorithms have rewarded the production of visceral and emotive content.

While there is a great deal of data on the decline of revenues, profits and number of journalists employed by news organizations, the potential public harms from the new news and journalism ecosystems are inflicted on very large and dispersed groups, and they are much more difficult to analyze and measure. This report will focus on these potential harms and

[17] Kennedy & Prat (forthcoming).

recommend ways to develop a more sustainable and competitive economic model for a news media ecosystem that produces quality journalism. These recommendations include a new way to increase funding and competition in the news market as well as the transparency and accountability of digital platforms.

THE PRECARIOUS ECONOMICS OF NEWS

News is an information good—perhaps the purest form of it. Whether it be day-to-day decisions regarding what products to buy, how to manage health, how to prepare for the weather, or political decisions regarding whom to vote for or whether to attend a protest, the news provides information that allows people to make those decisions facing less uncertainty. However, information goods, especially news content such as investigative journalism, have some unique characteristics that give rise to underproduction of news and lower demand. In this section, we explain the unique economics of newsworthy information.

Information, once produced, can be consumed widely without constraint, making it non-rivalrous. Unlike a physical good, when one agent consumes information this does not prevent another agent from doing the same. Also, information, once disseminated, can be distributed by agents other than the agent responsible for its production, making it non-excludable. Both these characteristics of information give rise to underproduction of information, as the producer of information, who incurs the fixed cost of producing news, is unable to accrue the full benefit from producing it, as it is easy to copy and share.

Another important characteristic of information that arises from the demand side is uncertainty. Almost by definition, information is a good whose value is not necessarily known to the consumer at the time of purchase. If information is revealed to the purchaser, which is what efficient purchases of a good would entail, the purchaser has no incentive to actually pay for the information once disclosed. In such a case the information producer has to resort to trying to sell information without disclosure. What this implies is that the demand for information will be lower than it would otherwise be and will not reflect the value consumers actually place on that information, which will also drive diminished returns for information producers. However, this also means that the production of many information goods will depend on finding means of payment— such as advertising in case of news—that do not involve direct payments from consumers themselves.

Box 3: Kenneth Arrow on Economics of Information

The Nobel prizewinning economist Kenneth Arrow identified indivisibility and inappropriability as characteristics of information that would lead to insufficient production. These generate the challenge of ensuring that the returns to those responsible for producing information (that is, those bearing the costs of production) are closer to the social return for information production. In modern parlance, this is often broken down into two dimensions of the public nature of goods under the terms *non-rivalry* and *non-excludability*.

For information with value that cannot be so easily inferred from past experience with the information provider, there is a special challenge.

Arrow (1962) put it this way:

[T]here is a fundamental paradox in the determination of demand for information; its value for the purchaser is not known until he has the information, but then he

has in effect acquired it without cost.[18] *Of course, if the seller can retain property rights in the use of the information, this would be no problem, but given incomplete appropriability, the potential buyer will base his decision to purchase information on less than optimal criteria. He may act, for example, on the average value of information in that class as revealed by past experience. If any particular item of information has differing value for different economic agents, this procedure will lead both to a nonoptimal purchase of information at any given price and also to a nonoptimal allocation of the information purchased.*

Undersupply and underdemand of information may be more acute for certain type of news. Some news—such as that related to weather, traffic conditions, impending or actual disasters, product reviews, or scientific breakthroughs—is of primary use for individual decision-making. By contrast, other news is of primary use for social decision-making, including how to vote, how to protest and whether to avoid or support particular businesses or organizations. In this situation, the decisions one person is making are part of a collective decision-making process, and, hence, each person will be interested and place value on others who are participating in the decision having access to that news. Apart from the private versus social dimension of the news, news also differs in terms of its timeliness or, more critically, its longevity, that is, how close in time it is to the moment a relevant decision has to be made. This is most obvious with respect to weather and traffic decisions, but may also be of importance for protests or disasters. By contrast, news about corruption or poor policy-making might be of use for the next election, and, therefore, its value does not necessarily depend on its timely provision.

Consider a case of investigative journalism that exposes the corruption of a government official in a particular county. Such news has limited private benefit for readers, and very few users are likely to buy this news story. Yet, the public benefit from exposing this story is large, as it not only exposes a corrupt official but at the same time creates a deterrent for corruption in the future as officials fear similar exposés. Hence, investigative journalism is a public good with limited private benefit. Such investigative journalism is costly to produce and delivers limited immediate private benefits for news media outlets.[19]

There are good reasons to believe that the economic issues associated with the supply and demand for information become stronger as news moves from the private to the social and, perhaps paradoxically, from being of immediate to longer-term use.

A look at the case of investigative journalism helps reveal how the production of such journalism is acutely ridden with issues of underdemand and undersupply. Investigative journalism is the provision of news as the result of a long, complex and often very costly investigation. As a result, it is unlikely to be the kind of news that requires quick action but is released well ahead of a decision point. In addition, it is more likely to involve a social element, whereby the consumption of that news by others raises its value to individuals. For example, an accusation of sexual misconduct against a powerful figure is likely to have a greater impact if it is widely read. Additionally, the longevity of news represents a problem for private provision, as there is time for that news to be provided by others. To see this, imagine that the output of investigative journalism is a 'scoop'—a news output that others do not have. A news outlet might publish a scoop and for a period of time may be the only

[18] See Roth (2002), and Gans & Stern (2010).

[19] Hamilton (2016)

outlet with that news. If the news has a short half-life, then that period would be valuable in that consumers would have an incentive to consume news in the originating outlet. However, if the news is long-lived, there is no similar time pressure. People will be able to consume the news more easily as it becomes widely reported. Even if this is done with attribution to the original outlet, it is not clear there is any mechanism by which that outlet will benefit disproportionately in terms of consumers willing to consume the news on that originating outlet. Thus, there is a clear production externality for such news caused by the knowledge spillover of that news to other outlets. Consequently, there is limited incentive to become an outlet that is able to invest in generating scoops of this kind.

Box 4: Biases in News

While this report and many other reports highlight the various potential harms of digital platforms to the business model, distribution and consumption of news, and stress the important contribution of journalism to democracy, it is important to stress that there was no agreed "golden age" of journalism, and it was always subject to multiple forms of capture and biases. Some sources of bias in media are:

- Bias toward political or corporate owners
- Bias toward funders
- Bias toward advertisers
- Bias toward newsmakers who provide access
- Bias toward slant of the audience
- Bias toward a particular ideology
- Bias toward sensational news that boosts ratings

An example of media capture could be due to banks. Recent research[20] showed that Italian newspapers that were more indebted were more more likely to agree with banks, whatever the interest of banks may be. In other words, as newspapers become less financially healthy, the more likely they are to be riddled with biases. This trend is also confirmed in historical research[21], where researchers find that, in the absence of a thriving subscription and advertising base, US newspapers were more likely to be politically captured in the 19th century. Similarly, in Argentina, newspapers that carried more government advertising covered government corruption scandals less between 1998 and 2007, showing evidence of advertiser bias.[22]

Another challenge that news presents that makes it distinctive in terms of the economics of information is that there is always potentially an interested party who will have some control over the news. Thus, news can be pursued independently up to a point, but there is always some area where conflict is to be expected. The only way around this is to have a diversity of news outlets with a consequent diversity of operating interests.

The above challenges of social news and special interest are especially severe in the case of investigative journalism. Coupled with the fact that such journalism—due to its non-rivalrous, non-excludable and uncertain nature—is subject to underdemand and undersupply, we conclude that production and consumption of investigative journalism–type content face many challenges.

[20] Zingales (2016)

[21] Gentzkow, Glaeser & Goldin (2006); Petrova (2011)

[22] Di Tella & Franceschelli (2011)

Box 5: Why is investigative journalism difficult to produce?

Investigative journalism has large public benefits, all of which cannot be captured by producers, but its production incurs *high fixed costs* (e.g., careful collection of evidence and analysis) with a long gestation period, which may lead to dead ends and failure. Such journalism is also *hazardous*, and prone to lawsuits, and may also antagonize stakeholders (advertisers, owners, newsmakers etc.).[23] Finally, due to its public nature, investigative journalism has uncertain benefits. It has been suggested that a key benefit from successful investigative journalism stories tends to be of reputation, and that "investigative journalism is like haute couture . . . . It isn't highly profitable per se, but it helps create brand awareness and it excites the most talented designers... [and is done] when margins are high."[24]

Overall, the production of investigative journalism is like taking a risky bet with few upsides and many downsides. News media firms may take such risky bets to produce investigative coverage only if they have the capacity to produce such "haute couture" content, the power to bundle and distribute such news, to best monetize it, and the incentive to differentiate from the competition.[25]

DIGITAL PLATFORMS AND DISRUPTION OF NEWS

In this section, we look at the business model of news and discuss how the Internet and the digital platforms have influenced the business model of news at its various stages of production, distribution and consumption of news.

Production of News

Reducing the Incentive to Produce Original Content

As consumers move principally to online consumption, it is becoming easier to "steal content" from competitors. This affects media outlets' incentives to produce high-quality (and costly) news content in the Internet era. Recent studies of audience news consumption behavior have indicated that news users increasingly rely on multiple news media and seem to shop for the best news across outlets online.[26] As a consequence, they follow the news on multiple media platforms.[27] It has been well-documented that the Internet has reduced loyalty to any single outlet, in particular for technological reasons.[28] Revealing is the fact that online when coming to a news website through search or social media, most users cannot recall the name of the website's news brand after their visit.[29] According to Reuters data, in France in 2018, consumers of at least one offline media outlet consume on average 2.83 outlets online.[30]

News in online media is not only copied by many, but it is also copied fast. An analysis of French media showed that on average news was delivered to readers of different media outlets in less than 4 minutes in 25 percent of the cases. Also, the analysis found that such high reactivity came with high verbatim copying, as only 32.6 percent of the online

[23] Hamilton (2016)

[24] Zingales & Rolnik (unpublished).

[25] Raj & Rolnik (2018)

[26] Athey, Calvano, & Gans (2013).

[27] Picone, Courtois, & Paulussen (2015); Yuan (2011).

[28] Athey, Calvano, & Gans (2013).

[29] Reuters Institute (2017).

[30] Reuters Institute (2018).

content was original.[31] Such a scale of copying online might potentially negatively affect media outlets' newsgathering incentives, as original news producers would capture only a fraction of the audience and of the economic returns to original news production.[32]

While a reactive online media reduces the incentives of news producers to invest in original content, in the long run, producers can gather reputation effects, whereby users do indeed share content from the original content producer more frequently. However, media outlets with a larger fraction of original content are still losing part of the audience they would receive absent copying and consumers' switching across outlets. Furthermore, this negative effect is accentuated by the impact of the platforms on the advertising markets for news media: when attention is spread across publishers, switching consumers actually see fewer ads than their loyal counterparts on a given publisher.

Platform Duopoly and the Business Model of the News Media

Consumers increasingly consume information on news aggregators such as Google News or Yahoo News, and there is a debate whether these aggregators act on the consumption side as a complement, bringing additional traffic to traditional media outlets online, or as a substitute, stealing the audience for these outlets, and then negatively affecting their news production incentives. Empirical evidence seems to indicate that news aggregators act as a complement on the consumption side. For example, analysis using a shutdown of Google News in Spain in December 2014–January 2015 as a natural experiment found that the removal of Google News reduced overall news consumption by about 20 percent for users affected by the shutdown, and visits to news publishers declined by about 10 percent, a negative shock that particularly affected small publishers.[33] In other words, Google News seems to act as a complement rather than as a substitute, at least for small publishers.

However, even if the "pure aggregators" act as a complement to the traditional media outlets on the consumption side, they may hurt media outlets' incentives to produce original content through their negative impact on the advertising market. Here one may think of the digital platforms all together (i.e., not only Google and Yahoo but also social media platforms such as Facebook and Twitter) and more broadly of all the tech giants rather than just the aggregators. Indeed, with the rise of the digital platforms, the supply of available ad space online has increased far more rapidly than the demand for it, owing mainly to advertising on digital platforms, so that the price has dropped precipitously. As a consequence, traditional media are devoting more and more space for online ads, but are winning fewer and fewer of them. In 2018, Google and Facebook were the dominant digital advertising companies, with a combined 58 percent of the US market, followed by Amazon, whose advertising business is expanding quickly. According to the latest estimates from eMarketer, by 2020, Amazon will have captured a 7 percent share of US digital ad spending, compared with Facebook's 20.8 percent and Google's 35.1 percent.[34]

The growth in digital ad space is far from being shared equally among players in the online advertising ecosystem. Google and Facebook act as a digital duopoly that represented up to 85 percent of all digital advertising growth in 2016. According to the European Audiovisual Observatory (2017) and

[31] Cagé, Hervé, & Viaud (2017).

[32] Anderson (2012).

[33] Joan & Gil (2016).

[34] Anderson (2012).

a number of other studies, this digital duopoly even represented all digital advertising growth in the United States by capturing 99 percent of digital ad growth in 2016, and up to 92 percent in France. That is, the share of the digital advertising growth left for traditional news media is nearly zero (and even negative for some news media).

This may even become worse in the future as a consequence of the European Union's General Data Protection Regulation (GDPR). The GDPR will reduce traditional media outlets' ability to collect data online—to protect consumers' privacy, the GDPR requires marketers to secure explicit permission for data-use activities—and thus their capacity to create targeted online advertising. But platforms such as Facebook will continue to collect tons of personal information on their users (with a monopoly on these data) and so become even more competitive on the targeted online advertising market.

Distribution of News

Once it has been created, news content needs to be distributed to create value. The fundamental issue that shapes this activity is the fact that, over any time interval, consumer attention is limited. Thus, even if news content is freely available, only a fraction of it will be consumed.

The ascent of digital platforms has negatively impacted the news distribution model. The fact that nowadays the vast majority of consumers prefer to get to news through social platforms and search, rather than going directly to a news website, has been well documented. But given that these access points are limited —again Facebook and Google are here in a nearly duopolistic situation—this gives them market power vis-à-vis the online news media and more generally vis-à-vis all the newsrooms. De facto, the digital platforms aim at dictating the terms of distribution and all dealings with the news media. News publishers have lost control over distribution; the news is increasingly filtered through algorithms and platforms that are opaque and unpredictable. In particular, each change in Facebook's algorithm has a huge effect on the size of the news websites' audience (implying changes in their revenues). This has been particularly striking in recent years when Facebook has decided to reduce exposure to news, instead prioritizing interactions with family and friends, and leading to a huge drop in the traffic from Facebook to news publishers' websites.

Disaggregation of the Customer

Advertising played an important role in funding traditional news media. Prior to digitization, advertisements would be placed physically in the newspaper or intermittently on television and radio. In equilibrium, advertisers and outlets would come to understand the make-up of consumers and be able to adjust advertising content accordingly. Moreover, there was a sense in which a newspaper or a program could result in the bundling of attention on a regular basis—that is, news consumers might read the paper or watch the nightly news every day. Thus, an advertiser looking to place ads in front of those consumers would know precisely where to find them. This assisted in making each ad more valuable, and the advertiser and outlet would benefit and divide value from such matches.

In principle, digitization would not change anything with regard to this type of product. Indeed, as it became possible to know even more about individual consumers (through data collected about them through, say, their browsing and click behavior), the ability of outlets to match consumers and advertisers should have been enhanced. In non-news related advertising such as search, this promise of more efficient matching was brought about. However, in news related advertising, digitization brought more choice for consumers. In other words, consumers split their attention across outlets by a substantially increased degree and, moreover, would not necessarily follow the editorialized priority for content on the same outlet—picking and choosing what they wanted to pay attention to rather than passively accepting the "flow" of content chosen by editors.

While such fragmentation of attention was a natural and efficient response for consumers, it also meant that the advertising product that outlets were selling became far less straightforward and, instead, the issue of how to put an ad in front of particular types of consumers potentially became harder rather than easier to address. In effect, while before a sales department of a news outlet could tell advertisers about the consumers that it, almost exclusively, could bring to them, with the fragmentation of attention, that sales pitch involved consumers that may also appear in the sales pitch of other outlets. For advertisers, it became harder to identify when consumer attention might be sold and, moreover, who might be selling it. This combination of lower match quality along with greater competition between outlets at the margin is a potential explanation for the dramatic loss in advertising revenue (even independent of classified ads) that occurred from 2000 to the present day.

The breakdown in the coherence of advertising products around news did, however, invite changes to reconstitute it. In each case, these changes were designed to re-aggregate consumers into bundles of attention that could be described, understood and sold to advertisers. We describe each in turn.

Advertising Networks and Attention Aggregation

One of the issues that created difficulties for the advertising product of news outlets was that it was difficult to track users and which ads they had seen (both within but mostly between outlets). Ad networks (such as DoubleClick, which was acquired by Google) were developed that allowed for tracking—at least when consumers used a single browser on a single device—and the promise of such tracking was to ensure that consumers received the "right" number of ads from a given advertiser and were not "missed" or served up too many ads, leading to "wasted" impressions.

Such advertising networks allowed advertising markets to become reorganized in a way that was not outlet-centric. The challenge, however, is that this took away another piece of information useful for matching consumers to ads—that is, the self-selection that comes from consumers deciding which content to devote their attention to. Ad networks are very efficient at matching relatively generic ads with consumers or targeting consumers with ads based on their browsing behavior. However, this happens at a higher degree of abstraction than what might attract them in terms of news. News outlets—especially local ones—may have been better able to match local consumers with local businesses. While that is possible for advertising networks, it is possible that something was lost in the transition.

Subscriptions and Attention Aggregation

As the business model of the media is in crisis, with falling advertising revenues and print subscribers, in recent years, news media firms have been transitioning to charging subscription fees for their digital content. While some news outlets are better able to generate subscription revenue than others—in particular, national or global outlets—this has flow-on effects to the organization of the advertising market. This is because, despite those subscription fees, advertisements continue to be placed in front of subscribers.

Although the free Internet fragmented consumer attention across outlets, when a consumer subscribes to an outlet, it signals that that outlet will grab a higher share of his or her attention. As a result, this makes subscribers' attention a more straightforward product to sell to advertisers. In other words, it can counter that disaggregation that might otherwise occur, while at the same time making subscription and advertising revenue (to a degree at least) positively associated.

Social Media and Attention Aggregation

Another way in which attention has been aggregated in a way that makes the advertising product more coherent is social media. Social media has the quality—like the newspapers or nightly news of older times—of managing to regularly and reliably grab a share of consumer attention each day. That means that social media networks can sell advertising products that more consistently match ads and consumers without missed opportunities or waste. This ability of social media to grab the attention of customers gives them an editorial function that curates that news. In other words, the aggregate attention that comes from being able to manage consumer information overload—something that used to be performed by news outlets exclusively—can now be undertaken by these networks and their related aggregators like Google News or Apple News.

Market Power in Advertising

The analysis of market power in advertising markets related to news (and potentially other) content has always been made more complicated by the two-sided nature of media markets. On the one side, outlets attract consumer attention and compete for it. On the other side, they sell that attention to advertisers. The question is: Having obtained some share of consumer attention, if an outlet chose to decrease the price of ad space, would that put pressure on other outlets to do the same?

The traditional answer is no. Having obtained consumer attention, an outlet is essentially a monopolist over reselling that attention to advertisers. In that sense, regardless of the prices they set, it will have no impact and not be impacted by the ad prices set for other outlets. In that sense, outlets have market power in the advertising market; to the extent that generates rents, those rents may be wholly or partially dissipated as those outlets compete for consumer attention.

The traditional answer, however, relies on an assumption that each consumer, over a relevant time period, gives all of her attention to a single outlet (which is called *single-homing*). This, in turn, motivates advertisers to advertise wherever consumers happen to be. However, when consumers fragment their attention (what is called *multi-homing*), this assumption no longer holds, and outlets do not have a monopoly over access to that consumer. In this situation, alongside the matching difficulties mentioned above, each outlet is no longer a monopolist in dealing with each advertiser and thus, outlets compete with one another. In this case, as one outlet lowers its ad price, it will put pressure on others to do the same.

Consumption of News

Box 6: Bundling and Architecture of Serendipity

As news is public information, bundling of that information is an important manner in which traditional news outlets have attracted and retained customers. Traditional news outlets sold different news content types as a bundle. To reach a large audience, outlets had an incentive to bundle diverse news. So, a typical newspaper covered content including national, international and local politics, business, sports and page 3 culture, along with classified ads.

The bundling and curating by experts (editors) created additional value, as this curation built an "architecture of serendipity."[35] Sunstein (2008) notes that, "For good lives, good universities, and good societies, the power of self-sorting is at best a mixed blessing. However unpleasant and jarring they can be, unchosen, unanticipated encounters play a crucial role; they are indispensable not only to education but also to citizenship itself. Far from wishing them away, we should welcome them."

Curated bundles of news promoted the discovery of news. While customers chose the quality, slant and niche of their newspapers, they received news as bundles, and so were exposed to news that may be "unpleasant," "jarring," "unchosen," or "unanticipated." Such a system of serendipity limited the degree of self-sorting.

A lab study[36] found that news that catches public attention may be biased towards negative or "horserace" related political content. Given such preferences, news bundling helped the spread (and production) of new content such as investigative journalism, which is of public value but not designed to catch attention and go "viral.". Thus, bundling reduced underinvestment in public goods like investigative journalism.[37]

Platforms have for most of their existence insisted that they are not media companies.[38] They have described what they do as offering neutral platforms for connectivity, allowing users to find information of relevance to them. It has now become clear that platforms' moderation of content creates salience. How they do this—what content platforms promote and what they hide, who is speaking and with what credibility—is not transparent. This opacity works hand in hand with moderation to put people in the flows of content that they cannot assess and cannot escape. The principal method by which platforms create media salience is through their algorithmic design and recommendation engines. Their algorithms are a form of editorial judgment that privileges particular forms and sources of media content.[39] In this way, algorithms shape consumption on an individualized basis.[40] Platforms also exercise editorial judgment by blocking content. Platform moderation, whether by algorithmic design or by human intervention, whether by prioritizing content or blocking it, is an "essential, constant, and definitional part of what platforms do."[41]

Atomization of News

Traditional news media would produce editions of news that would bundle news of multiple types. To attract a large base, such a bundle would offer a variety of content and viewpoints, and also provided editors the ability to bundle stories of public relevance such as local investigative journalism, such as on local corruption, which would not have grabbed readers' attention otherwise if left to compete for attention on its own. In the digital age, news has been atomized, as users often consume content curated by the algorithmic editing by digital platforms.

The editorial power of digital platforms also influences the editorial decisions of news producers. An analysis of an online news dataset obtained from an Indian English daily newspaper showed that editors give more

[35] Sunstein (2008).

[36] Trussler & Soroka (2014)

[37] Hamilton (2016)

[38] See generally Napoli & Caplan (2017) and Pasquale (2016).

[39] Carlson (2018).

[40] Caplan & Boyd (2018).

[41] Gillespie (2018).

coverage to news stories whose articles receive more clicks and that this effect is quantitatively important.[42] Digital platforms and "virality" have become so important to editorial decisions that researchers have found that a number of news stories first originate on social media, and absent their propagation on social media, these stories would never make it to the website of the traditional news publishers.[43]

Moderation of News Content

Content filtering

Most Americans encounter a substantial portion of their news media through information platforms. According to the Pew survey, more than 68 percent of American adults get some news from social platforms, with 20 percent doing it often.[44] As of the end of 2016, 45 percent of all traffic to publisher sites came from Facebook. Google was responsible for 31 percent.[45] It may be the case that these numbers may be beginning to decline across the globe, according to Reuters Institute. In some countries, especially authoritarian ones, messaging apps like WhatsApp are becoming more important for news circulation; WhatsApp is used for news by about half of surveyed online users in Malaysia (54 percent) and Brazil (48 percent), and by about one-third in Spain (36 percent) and Turkey (30 percent).[46]

As discussed above, the dominance of information platforms as a distribution mechanism for news impacts the production side of journalism, in terms of reducing the advertising base to fund journalism and incentivizing news media to produce content that will survive algorithmic sorting.[47] These algorithmic filters also influence what news content is consumed.

Like traditional news publishers, platforms are in the business of selling audience attention to advertisers. They are able to do this with unprecedented efficiency by using personal data to promote content predicted to engage users and thereby provide more value to advertisers. Platforms offer advertisers access to the "data exhaust" of individuals as they move in real space and across devices so they can target the most receptive audience segments.[48] Online advertising "has evolved rapidly from a digital version of conventional ad placement involving agencies and publishers, to what is now a data-driven market focused on audience segmentation and targeted messaging."[49]

Platform companies feed user data into models that produce an advertising technology platform. Using this platform, advertisers can find narrowly segmented audiences and target them through social media feeds and websites with ads ever more precisely tailored to their perceived personal preferences. Platforms develop their predictive models based on inferences from user data including preferences revealed through past consumption or likes.[50] Where advertisers have data, in the form of customer lists or other personal data, the platforms can find audiences that share characteristics and thereby deliver to advertisers what Facebook calls a "lookalike"

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[42] Sen and Yildirim (2015)

[43] Cagé & Mazoyer (2019)

[44] http://www.journalism.org/2018/09/10/news-use-across-social-media-platforms-2018/.

[45] Bell et al. (2017).

[46] Reuters Institute (2018).

[47] See Bell et al. (2018), p. 28 (news media companies must devote resources to accommodating the platform algorithmic changes); Marwick & Lewis (2017).

[48] Wu (2016), Ghosh & Scott (2018, p. 13).

[49] Ghosh & Scott (2018, p. 5).

[50] Wilding et al. (2018).

audience.[51] Advertising includes not just product promotions but also paid content. Information producers can use data profiling to target audiences using the same approach as product advertisers. There has been considerable controversy, for example, with disinformation providers using these tools to "deepen engagement with known audience segments and broaden engagement to new ones."[52]

Platforms will only be successful in generating user engagement with advertising if they can generate engagement with content. Serving up editorial content, whether user-generated or professionally generated, follows the same logic as serving up advertising. Platforms target individuals with content that will be most engaging based on predictive inferences. The platform may apply content filters based on direct signals from the user, collaborative filters based on the preferences of similar users, or some hybrid of the two.[53] The platforms do not disclose how they filter content. Twitter's "trending topics" are already popular. Facebook News Feed and YouTube's Suggested Videos seek to predict what will become viral in a user's network and amplify it with that use.[54] Facebook explains that its News Feed algorithm attaches a "relevance score" to content based on predictions about a user's likelihood to click, likelihood to spend time with the content, likelihood to like, comment and share, likelihood that the user will find the content informative, likelihood that the content is "clickbait", and likelihood that the content links to a low-quality web page.[55]

Users can customize their news feeds on social media platforms to a degree, within the constraints of the algorithmic filters that are applied. Facebook friends and Twitter follows shape content exposure.[56] Friends and other influencers people choose are important funnels for what news reaches them.[57] Google allows users to customize their Google News settings and subscribe to channels on YouTube. Individual choice, however, can push back only so far against the forces of algorithmic filtering. YouTube autoplay queues up the next video to carry viewers from one video to the next to keep them on the platform. The addictive qualities of social media platforms keep people attached to the flow of content long after they have left the confines of their "selected" content. Social bots are one way that content providers can hack people's attention to push content on them that they might not have chosen and cannot choose.[58]

Algorithmic filtering does not care in principle about the quality and type of content it promotes. Relevance and engagement are what it cares about. The theory is that if consumers do not like and will not engage with low-quality information, then presumably they will see less of it and vice versa. There are at least two caveats to this revealed preference theory. One is that the preferences accounted for algorithmically are only revealed preferences, not the higher-order considered preferences of public service media theories. The second is that algorithmic filtering stops

[51] Ghosh & Scott (2018, p. 16).

[52] Ghosh & Scott (2018, p. 17).

[53] Ricci, Rokach, & Shapira (2011).

[54] Grimmelmann (2018).

[55] https://www.facebook.com/help/publisher/718033381901819?helpref=faq_content

[56] See DeVito (2017) (finding friends on Facebook to be the most important determinant of News Feed choices).

[57] Bergström & Jervelycke Belfrage (2018) .

[58] Shao et al. (2018): ("[B]ots are particularly active in amplifying fake news in the very early spreading moments, … target influential users … [and] may disguise their geographic locations.").

offering consumers content that they are not predicted to want. Eli Pariser calls this the *filter bubble*: algorithms drive people into narrower homologous information spaces where the content confirms biases and does not expose them to differences.[59] This theory is challenged by other research that shows algorithmic exposure to multiple viewpoints.[60]

Whether or not algorithmic filtering reduces exposure to alternative viewpoints, it privileges a certain kind of content. This is content that provokes outrage and emotion and tends to extremity. Studies show that filtering algorithms funnel people into more extreme expressions of their particular preferences, including political and cultural ones. Viewpoint amplification encourages engagement.[61] With respect to political viewpoints, this tendency seems to be more pronounced on the right than on the left, with the consumption of highly partisan information asymmetrically concentrated among those with more conservative views.[62]

There is not always a line between human and algorithmic filtering on the platform. The algorithm is created by humans and changed by humans. For example, in January 2018, Facebook announced changes to its News Feed algorithm to prioritize "meaningful content posted by friends and family over the news, videos and posts from brands."[63] As a result, the amount of news shrank from 5 percent to 4 percent of the content on feeds. Facebook also changed its algorithm to prioritize local news.[64] We do not have good data on what these tweaks do to news consumption, nor are these changes to be relied upon as long-term strategies. Facebook has altered its strategies before, most notably with respect to its "pivot to video." News producers put resources into accommodating the new algorithmic strategy, only to see the strategy change again. Not only can platforms like Facebook or Twitter alter media consumption through algorithmic tweaks, but they can also alter behavior by favoring certain messages.[65] The opacity in the system means that we only know about these tweaks when they are disclosed or, rarely, discovered.

Content blocking

While algorithmic sorting prioritizes information, another mechanism blocks it and ensures that it will not be consumed on the platform. Blocking often, but not always, involves human intervention. Platforms moderate content by two means and at two stages. The means are human or machine. The moments are before and after publication. Before publication, software will block content that can reliably be identified as illegal or otherwise prohibited.[66] This kind of automatic blocking is used to prevent the circulation of content that allegedly violates copyright, has been identified as violating local laws (e.g., child pornography), or violates the platform's terms of service. This form of ex ante content removal is more relevant to user-generated content than to news producers.

[59] Pariser (2011). See also Sunstein & Vermeule (2009).

[60] Bakshy, Messing, & Adamic (2015); Fletcher & Kleis Nielsen (2017) (contesting evidentiary basis for the proposition that online audiences are more polarized than offline audiences).

[61] Tufekci (2018).

[62] See Guess, Nyhan, & Reifler (2018) ("pattern of selective exposure was heavily concentrated among a small subset of people—almost six in ten visits to fake news websites came from the 10 percent of Americans with the most conservative information diets").

[63] Beckett (2018).

[64] https://newsroom.fb.com/news/2018/01/news-feed-fyi-local-news/

[65] See Zittrain (2014) (describing how Facebook and Google can alter voter turnout by tweaking news feed and search results).

[66] Klonick (2018).

Most content moderation takes place after it is posted, and is conducted through a combination of human and machine algorithms. The platform, for the most part, reacts to content users have flagged for review. There is little transparency into how they make these decisions or what the results are.[67] "Each social media platform has cobbled together a content moderation labor force consisting of company employees, temporary crowd workers, outsourced review teams, legal and expert consultants, community managers, flaggers, administrators, moderators, super flaggers, nonprofits, activist organizations, and the entire user population."[68] Increasingly, in the wake of public outrage over the use of platforms to incite violence, spread disinformation, recruit terrorists, and otherwise propagate "bad" content, platforms moderate proactively. They remove content and accounts that violate their terms of service without relying on users to tell them to. This moderation is also opaque. Kate Klonick's research suggests that content moderators adopt traditional analogical reasoning, apply multifactor tests, and conduct balancing. Casey Newton's investigative reporting has revealed that Facebook content moderators work under high pressure, often exploitative, conditions that are harmful to their mental health.[69] Their decisions about content are guided by Facebook's public community guidelines, internal supplemental guidance, and episodically updated interpretations in real time that may override that guidance.

Box 7: Trust in the Age of the Internet

The advent of the Internet and consumption of information online changed how people view, understand and trust the information they receive. Old relationships were upended, and traditional journalism's authority was undermined.

In the absence of the traditional signals of authority, how do audiences gauge trustworthiness? A 2003 study by JD Greer found that they consider whether a site belongs to a person or a well-known outlet, but not whether the advertisements represent reputable organizations.[70] Similarly, a 2007 study of user behavior defined two key elements of credibility as being "site" credibility and "sponsor" credibility, and found that respondents trust news sites more than personal sites.[71] Lack of transparency[72] and use of native advertising are said by consumers to make them less trusting of the media.[73]

Researchers[74] have further found that because traditional clues of credibility (bylines, trusted brands) no longer prevail and it is often not clear on aggregation sites where information originated, online articles with direct quotes from named sources were viewed as more credible then those without.

Just as they did in the Middle Ages, audiences trust information that is familiar and/or comes from friends. Coverage of something that people have experienced may also make them more likely to trust media reports.[75] One study[76] found that fake news headlines that were familiar were perceived as substantially more accurate even when they were clearly

[67] Klonick (2018); Chen (2017)

[68] Gillespie (2018).

[69] Newton (2019).

[70] Greer (2003).

[71] Flanagin & Metzger (2007).

[72] Milhorance & Singer (2018).

[73] Amazeen & Muddiman (2018).

[74] Sundar et al. (1998).

[75] Livio & Cohen (2016).

[76] Pennycook & Rand (2017).

implausible or contradicted the respondents' beliefs. Warning labels about the headlines being incorrect had no effect on perceptions of credibility or even caused people to share the information more as readers assumed that a Facebook warning meant the story was true.[77]

Based on a survey using Facebook data on graduate students about non-partisan news issues, researchers found that recommendations from Facebook friends/ opinion leaders caused respondents to trust both the news article and the outlet it came from more, and caused respondents to say they would be more likely to read an outlet in the future.[78]

Through content filtering and blocking, digital platforms have become increasingly influential in determining what information people consume. Hence, while the Internet emerged with the promise of democratizing information access, with the rise of digital platforms as information gatekeepers, information flow and curation has become more concentrated.

The figure[79] below summarizes the differences between the functioning of traditional news media, and the news media after the rise of digital platforms.

A look at the economics of news media shows us that the news media industry has been facing three distinct disruptions with the rise of digital platforms.

- **Advertising disruption**: The production of investigative journalism has become difficult because ad revenues have dwindled with the rise of digital giants, and cash-strapped news media firms cannot afford to produce original journalism-type content.
- **Atomization disruption**: Newspapers have lost the power to bundle news, and news no longer remains picked by professional news editors. Instead, news gets bundled by opaque algorithms designed by a few digital giants, who have become the new gatekeepers of news and information, and whose only goal is to maximize engagement.
- **Accountability disruption**: In the traditional model, editors were responsible for the news they published for public consumption. In the digital model, algorithms designed by digital giants to filter and curate content have little incentive to be public-spirited, as algorithms neither produce the content, nor do they pay the negative externalities. Instead, they are designed to maximize "engagement," which pushes them to prioritize visceral and viral content over news of public interest.

[77] Levin (2017).

[78] Turcotte et al. (2015).

[79] Raj and Rolnik (2018)

THE MARKET RESPONSE

The market has responded in the last decade to the sharp decline in revenues of news outlets in various ways. Most prominent was the surge in the number of news outlets financed by philanthropists and foundations. Another market response was a gradual shift of outlets to a revenues model based solely or mostly on subscribers. While these market responses try to tackle the revenues or the financing sources, other market responses try to reduce the costs side. Among these are efforts to use technology and computation to perform some of the journalistic work and collaboration between large groups of newspapers on global investigative projects. In the next section we review these market responses and discuss their various shortcomings.

The Multifaceted Donation Model

Philanthropy is booming in our democracies, in particular in the US, where we see a growing role of private funders in the provision of public goods as government retrenches. Such a phenomenon is not specific to the media industry. As highlighted in Reich, Cordelli and Bernholz (2016), "in the United States and most other countries, we see philanthropy in all areas of modern life," but philanthropy also increasingly supports the provision of information.

The growing role of philanthropy in media funding has been well documented. The *Growth in Foundation Support for Media in the United States* report published in 2013 by Media Impact Funders reports that $1.86 billion was awarded in media-related grants from 2009 to 2011. The investigative website *ProPublica*, created in 2008 by the billionaires Herbert and Marion Sandler, is funded entirely through philanthropy; its French counterpart, *Disclose*, launched in November 2018, is similarly raising money through crowdfunding and larger donations, including from US foundations (e.g., Open Society). Other examples include First Look Media and *The Intercept*, created by Pierre Omidyar; and recently *The Markup*, a news site to investigate big tech, subsidized by Craig Newmark (the Craiglist founder).

As of today, there are more than 150 nonprofit centers doing investigative journalism in the US, and for-profit newspapers like the *New York Times*—just like foundation-owned newspapers like *The Guardian* in the United Kingdom—have recently set up nonprofit ventures to support their journalism. Interestingly, *The Guardian* has decided to implement a unique business model, where there is no paywall (news is available online for free for all consumers), but where consumers are invited to nonetheless subscribe or donate to the newspaper so as to preserve independent journalism. As of today, *The Guardian* gets more revenue from consumers than from advertising thanks to the success of its membership and contribution model. More than a million people worldwide contributed to *The Guardian* between 2015 and 2018.[80]

Out of the 160 member organizations of the Institute for Nonprofit News (an association founded in 2009 with just 27 members), more than 100 were created between 2007 and 2017.[81] In France, the *Le Monde Afrique* website, launched in 2015 by the daily newspaper *Le Monde*, has received financial support from the Bill & Melinda Gates Foundation. Overall, philanthropy is becoming a very large part of the revenue streams of a

[80] https://www.theguardian.com/media/2018/nov/05/guardian-passes-1m-mark-in-reader-donations-katharine-viner

[81] Birnbauer (2018).

growing number of news companies. In a series of articles published in the *Columbia Journalism Review*, David Westphal defines philanthropy as "journalism's new patrons."[82]

Concurrently, during the last decade, we have also observed an increasing tendency of out-of-market billionaires to acquire media outlets, often at a very low cost but with even lower profit expectations. Jeff Bezos (Amazon) and *The Washington Post*, Patrick Soon-Shiong (a biotech billionaire entrepreneur) and *The Los Angeles Times*, Marc Benioff (Salesforce) and the *Time* magazine are but a few examples of this new "taste" of tech entrepreneurs with deep pockets for the media industry. While these new media moguls publicly claim that they are acting as philanthropists, it is more accurate to call them "new media patrons." The development of this patronage model is far from specific to the US, as is apparent from the recent entry of telecommunications billionaires on the French media market (e.g., Xavier Niel and *Le Monde*; Patrick Drahi and *Libération*, BFMTV, RMC, etc.), and most recently of the Czech billionaire Kretinski (who made a fortune in the energy sector, and is now buying shares in *Le Monde* and other media outlets). Furthermore, this model has a historical precedent. In the 19th century, before the appearance of the penny papers and the development of mass media, "out of their own funds, wealthy political leaders sometimes provided start-up capital for newspapers."[83] The main difference with today's situation is that while historically the patronage was *political* inasmuch as these newspapers were endorsing political parties, nowadays, a large share of the new media moguls seem to care much less about politics (ensuring that a Republican or a Democrat candidate is elected) but much more about regulation. Or, more precisely, about the assurance of the absence of regulation (in particular in the case of the e-commerce and of the telecommunication sector).

It is important to distinguish between philanthropic funding (via charitable donations) of the media on the one hand, and the patronage model on the other. The philanthropic model consists of creating nonprofit news organizations that are then funded via charitable donations. The patronage model, while it also claims to be philanthropic in spirit (in particular in view of the low profitability of the sector), consists in buying and controlling news media organizations, keeping them as for-profit entities. But in the end, these two models pose similar problems regarding journalists' independence and the disproportionate weight given to the preference of the wealthy. While philanthropy may offer one resource with the potential to fund the production of high-quality journalism, media outlets must resist potential hidden agendas. This is not specific to the media, and the risks of philanthropist funding have already been highlighted in the context of the funding of education, with questions about the power of donors to set research agendas. As highlighted by Reich (2018), we must consider philanthropy "as an act with political dimensions, in the sense that philanthropy can be an expression of political power. … Wealthy elites can pose problems for democratic politics, even—and perhaps especially—when elites direct their wealth toward the public sphere" (p.64).

Both the philanthropic and the patronage model raise the same issue: Power resides where the money is. The media have all too often served as toys for billionaires in

[82] Westphal (2018)

[83] Hamilton (2004) similarly highlights that, before the emergence of nonpartisan reporting as a commercial product in the American newspaper markets in the 1870s, the type and amount of information provided depended on the value of the readers as that derived from political patronage.

search of influence. From this point of view, there is no difference between private ownership of for-profit entities and the funding of foundations. Most often, donors indeed retain control over the governance and the purpose of the foundation, and in particular over how the funds are spent. If—to take only one example that shows how complex the situation is, since absent this external funding the newspaper would have cut off its newsroom—being owned by the founder of Amazon raised an independence issue and auto-censorship risk for journalists working at the *Washington Post*, who may for example less easily cover issues linked to e-commerce, what is the difference between being owned directly by Jeff Bezos (as is the case today) or being funded on a daily basis by a hypothetical "Bezos Foundation for the Media" created, funded, and governed by the same Bezos? This answer is simple: There is no difference.

The limits of the foundation model for the media have been well described. Benson (2016) has documented that "foundation donations are not 'free' but rather constitute a redirection of public resources … to nontransparent and unaccountable foundations that have assumed media policy responsibilities." Moreover, foundations prefer funding specific projects rather than general operations, which creates the possibility of conflicts of interest. Obviously, founders will always claim that they never impose changes to the content of the investigations they have funded—and it may well be the case—but do we really expect media outlets to apply for funding to investigate the funders?

Underlining the limits of the foundation model does not mean, however, that we do not need nonprofit journalism. On the contrary. The central question is not one of the corporate form of the news organization (for-profit or not-for-profit) but the one of its governance. A number of interesting initiatives have emerged in recent years, such as the Civil Media Company in 2018, a startup that aims to use blockchain technology and crypto-economics (more precisely a cryptocurrency based on the Ethereum blockchain) to start hundreds of publications in the United States.

Regarding the donation model, note in conclusion that a growing number of donations are made today by the digital platforms themselves. Google's "Digital News Initiative," for example—initially launched for three years in 2015 with a $150 million fund and relaunched in 2018 with $300 million to be spent over the next three years—can be considered as a foundation-like initiative to support the media. Similarly, the Facebook "Journalism Project" aims at helping local news outlets make use of social media. Another example is the Google News Lab, whose catchphrase is as follows: "We collaborate with journalists and entrepreneurs to help build the future of media." While it is now clear that digital platforms should contribute to the funding of journalism (given they are weakening the economic fundamentals of high-quality news production, and they are making money out of it)—an issue we will come back to in the solution part of this report—it is unclear they should do so as if they were benevolent donors. Because they are not. Furthermore, they should not be free to choose which media outlets to help or not.

The Newsrooms Collaboration: An Alternative Path for Non-profit Journalism

While we have just highlighted the pros and cons of the donation model for the future of the news media, it is interesting to focus on a new form of nonprofit news organizations, the consortiums of journalisms. The most famous is the International Consortium for Investigative Journalists, a global network of more than 190 investigative journalists in more than 65 countries around the world, which recently exposed the Panama Papers and the Paradise Papers.

More generally, collaborative journalism is growing all around the world. Collaborative journalism is defined by the Center for the Cooperative Media as "the practice of executing journalistic endeavors using a cross-entity approach." Already in 2014, the Pew Research Center noted these collaborations defined "a new era of interest."[84] The website Medium recently listed the best collaborative journalism projects of 2018, among them the BBC Local News Partnership, which gathers together 843 newsrooms within 90 news organizations in the UK sharing local content.[85] In a recent report, the Center for Cooperative Media of Montclair State University identifies six models of collaborative journalism: (i) temporary and separate, (ii) temporary and co-creating, (iii) temporary and integrated, (iv) ongoing and separate, (v) ongoing and co-creating, and (vi) and ongoing and integrated.[86]

What are the advantages of collaborative journalism? The very first one is economically driven. As highlighted above, the media incentives to produce original news are negatively affected nowadays by extensive copying. Collaborative journalism and consortiums of journalists can be an interesting solution for media outlets to reduce the fixed costs associated with costly investigative journalism by sharing them. (In a sense, this is the exact same logic as the one behind the Associated Press at the time of the creation of this nonprofit cooperative.)

Furthermore, investigative journalism increasingly relies on the use of big data, which necessitates costly—and sometimes complicated to use—data-driven technology. The Panama Papers investigation, based on a 2.6 terabyte trove of data, would not have been possible without these new technologies such as automation, algorithms, OCR, etc. Here again, it is much easier for journalists to collaborate across newsrooms. Note, however, that the Panama Papers leaks also would not have been possible without journalists. They involved more than 100 media partners and several hundred journalists. Similarly, for the Paradise Papers investigation, with its files including far more information about US citizens, the ICIJ collaborated with more than 380 journalists working on six continents in 30 languages.

Finally, at a time when there is a growing threat to journalistic independence and press freedom, in particular due to recent changes in media ownership, collaborative journalism can be seen as a way to avoid censorship. The example of the Panama Papers is particularly relevant from this point of view. Given that tens of newsrooms in many different countries were involved, it was impossible for each country to censor some of the findings.

Obviously, all these advantages do not imply that collaborative journalism is the sole solution to the media crisis. There are some downsides to the consortiums of journalists. As highlighted by the Pew Research Center (2014), "things can easily go wrong." The report gives the example of a Knight-funded grant series to pilot eight collaborations between news outlets that had only one active participant when the seed money ran out. But overall, it seems necessary in the future to provide more funding to these initiatives that allow the production of investigative journalism.

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[84] http://www.journalism.org/2014/12/04/journalism-partnerships/

[85] https://medium.com/centerforcooperativemedia/a-look-at-nine-of-the-best-collaborative-journalism-projects-of-2018-cfd49b3c4865

[86] https://centerforcooperativemedia.org/center-cooperative-media-identifies-6-models-collaborative-journalism-revolution-media/

The Subscription Model

Despite the observed drop in advertising revenues in recent years, the core business model for effective financing of publishers' websites is still through advertising. Advertising is indeed the largest contributor to publishers' online revenues. Even if pay models are becoming an important part of the business of digital news nowadays, in most countries there is still only a minority of news lovers who pay for online news.[87]

However, it is interesting to highlight that a number of recent and successful media outlets have made the choice to rely only on subscriptions. One of the best illustrations of such a successful strategy is the French pure online publication *Mediapart*. This publication, specialized in investigative journalism, was created in 2008 with a hard paywall model. It has in recent years played a key role in uncovering several corruption scandals involving politicians of both the left and right. At the end of 2012, for example, *Mediapart* revealed that the French budget minister evaded paying tax in France on sums deposited in undeclared Swiss bank accounts. Following *Mediapart*'s allegations, a legal investigation was opened into the tax fraud accusations, and Jérôme Cahuzac resigned before being charged with tax fraud. As of today, *Mediapart* has more than 140,000 subscribers providing revenue of €13.7 million (in 2017). With its 4,700,000 unique visitors per month and 85 staff members, the publication is highly profitable (and has been making a profit for seven years now).

As of today, *Mediapart* can be considered a model for the whole news industry. Why does the subscription model seem to be an interesting path to follow for the future of the news? First, because the collapse of advertising revenues for newspapers is not new. Even in the United States, where advertising is king, newspaper ad revenues have been declining as a percentage of GDP since 1956—and will continue to do so in the future.[88] Hence publishers need to find alternative sources of revenues. As we have seen above, in today's online world, publishers are competing with a duopoly online (Facebook and Google) and they are no longer competitive, in particular regarding targeted online advertising.

Second, media outlets such are *Mediapart* that are behind a paywall are much less dependent on the digital platforms regarding their traffic. Given the subscription model, their traffic is indeed mostly direct (while we saw before that the vast majority of consumers now prefer to get to news through a side door). This lower reliance on platforms implies that when Facebook decides to modify its algorithm—as it did for example in the summer 2018—a medium such as *Mediapart*, contrary to the majority of the French media, was barely affected.

Other innovative business models in recent years include the one of *The Correspondent*, which is entirely member-funded. Originally launched in 2013 as a Dutch news website funded through a successful crowdfunding campaign, *The Correspondent* just terminated a successful US$2.5 million campaign to launch an English-language "unbreaking news" platform in the summer of 2019.

Rating the Sources: The Solution to the Spread of Disinformation?

In the vast majority of Western democracies nowadays, a challenge is to fight against the spread of disinformation. The market has developed a number of solutions.

[87] Cornia et al. (2017).

[88] Cagé (2015).

One of them is NewsGuard, a browser extension that labels news sources with either a green (for trustworthy) or red (for unreliable) icon. NewsGuard was founded in 2018 and financed by the Knight Foundation and Publicis (among others). In 2019, it has expanded its partnership with Microsoft and is now accessible to users of Microsoft Edge mobile apps on iOS and Android. The company—with a team of roughly 50 journalists—rates more than 2,000 websites.[89] (Similar initiatives in the US include Snopes and PolitiFact.)

In the same spirit, the French daily newspaper *Le Monde* has recently developed Décodex, a database of around 1,000 websites compiled by *Le Monde*'s Décodeurs project in the course of their fact-checking. The Décodex divides websites into four categories: (i) satirical websites, (ii) websites that have published a significant amount of false information, (iii) websites whose approach to verification is questionable, and (iv) news websites.

The main downside of a database like Décodex is its reliability. Obviously, *Le Monde*'s Décodeurs project can be considered trustworthy, and *Le Monde*'s journalists are recognized worldwide as high-quality independent journalists. But other initiatives in other countries can be less reliable. And more importantly, a number of these initiatives may have a hard time convincing citizens that they are actually reliable. Breitbart, for instance, calls NewsGuard "media blacklisters" that "[promote] fake news."[90]

An open question remains: Who is going to investigate the reliability of the newsroom in charge of rating the other newsrooms? From this point of view, an initiative that may be more attractive than NewsGuard or Décodex is CrossCheck: French media outlets—from the Agence France Press to BuzzFeed through *Libération* and *Le Monde*— decided to team up on a fact-checking initiative. In other words, this initiative combines both collaborative journalism and the rating of sources.

Summary

News organizations around the world have shown different degrees of success in adjusting to the new realities of the digital world. While some news outlets or media groups were able to gradually transform their businesses into the digital era by investing in online businesses, most news outlets in the developed world had to aggressively cut the number of journalists. We surveyed a number of market responses of news organizations and entrepreneurial journalists to the new reality of the digital age. Chief among these responses is the surge in philanthropy-funded journalism. As noted in the section, this form of funding has created many successful initiatives, famous among them ProPublica in the US. Yet philanthropic-funded journalism can present the same problems that corporate control of news media presented in the past. Philanthropists may be benevolent players in the news ecosystem, but they may have their own agenda and limited interests. In most countries very wealthy individuals or billionaires would be wary or reluctant to finance or be involved in news outlets that pick fights with powerful politicians or business groups. A philanthropy-funded news ecosystem can result in a public discourse and media agenda that is in line with the point of view of a handful of billionaires.

The subscriber model that is proving itself for large established news outlets like the

[89] https://www.nytimes.com/2019/01/16/business/media/media-steve-brill-fake-news.html

[90] Nolte (2019).

New York Times, *Wall Street Journal*, or *Financial Times* and new digital native initiatives like *MediaPart* in France offers hope for quality news outlets that have a very distinct brand reputation in their market. But this model will be a partial solution for most countries. News outlets that were able to get significant subscribers revenues to support large newsrooms are usually the top national or global outlets that target very large audiences. The smaller the audience and the more local the reporting, the lower is the likelihood of a subscriber model achieving much success.

RECOMMENDATIONS

As this report acknowledges in different sections, democratic journalism has always been in "crisis." Nonetheless, the rise of digital platforms and the subsequent disintermediation of the relationship between publishers and users raises some important issues for the future of newsrooms. The question remains of what, if anything, can be done to directly address the platforms' control of the relationship between publishers and readers (a form of bottleneck power).

Digital platforms' bottleneck power manifests in their ability to use monopsony power to pay news outlets less than the competitive price for the news.[91] The previously described changes in news consumption patterns means that news outlets became increasingly dependent on online platforms to access readers, also becoming more dependent on the platforms to tap ever scarcer advertising revenue. This increased platforms' economic power: Not only do they carry news for free, with the only compensation for sharing snippets and other reports being the increased traffic and attention diverted to news outlets' websites. They also squeeze online advertising margins through their control over this associated ecosystem. To make matters worse, the dependency is one-sided: while platforms like Google and Facebook control ad exchanges and account for the lion's share of traffic to most newspapers, the opposite is not true: Facebook reports that only 4 percent of its News Feed posts are news. This further weakens newspapers' bargaining power, as well exemplified by the examples of Germany and Spain, where platforms simply stopped carrying news after changes in copyright laws required them to pay for news reports. The significant drop in traffic to most newsrooms was such that they were soon acquiescing to the older free-carrying terms in order to stay afloat. Another version of this power is the platforms' ability to maintain as proprietary most user data associated with news consumption—in particular when it is done through the platforms' API instead of on publishers' websites (a process that should rise as aggregators such as Apple News increases in importance).

Countries are struggling to develop tools that can effectively address this bottleneck power, which mostly reflects platforms' tight controls over their ecosystem—a process that may benefit users. Europe's revamped copyright laws hope to force platforms to the bargaining table by granting publishers more control over how their products are shared. While these efforts are laudable, this report is based on the view that the golden era of advertising-funded journalism never existed, such that attempts to return this glorious past seem misguided. That is why we defend a series of mechanisms to help newsrooms survive in a new technological environment: from alternative vouchers to fund the news media to a series of news monitoring obligations that should ameliorate the platforms' bottleneck power by providing more transparency about their actions. Nonetheless,

[91] See Cairncross (2019).

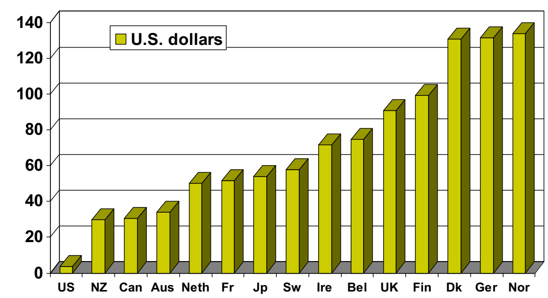
if digital platforms continue to control the interaction between newsrooms and users, a regulator should be empowered to take stronger action to reign in platform power and ensure that citizens can continue to access relevant news.

This system would be structured as part of the quid pro quo bargain that shields platforms from liability in exchange for more responsive and public-oriented companies. We endorse some of the suggestions of the Cairncross report—an independent report published in February 2019 that offers an overview of the challenges facing high-quality journalism in the UK—to require platforms to voluntarily adopt a code of conduct in which they clearly state the basis of their relationship with publishers. We would go further, recommending that such a code of conduct include not only economic terms (whether news outlets are rewarded for snippet sharing, etc.), but also a description of what types of user data the platforms will share with publishers and what efforts platforms are taking to distribute meaningful and relevant journalism within their ecosystems. This transparency should level the playing field and allow for competition between publishers to reach the audience. Access to data is particularly important, as it will help publishers establish more meaningful independent subscriber relationships . More data allows for better personalization in general, which will be reflected not only in better ads but, most importantly, in a publisher that is more responsive to the demands of its subscribers. Publishers may, for example, personalize digital editions to reflect the preferences of their readers—a process similar to what services like Apple News promise to do. It may also boost newsroom collaboration efforts, equally benefiting publishers.

[92] McChesney & Nichols 2010 (p. 310).

PUBLIC FUNDING OF NEWS

Public support of journalism is not a novel concept. In the US, public funding of the press was common in the nineteenth century in the form of postal and printing subsidies given to publishers to print and distribute newspapers, which were estimated to be around 0.21 percent of the US GDP between 1840 and 1844 (equivalent to $43 billion as 0.2 percent of 2018 US GDP).[92] As the figure below makes clear, in most developed countries, the government financially supports the media one way or another, while the US is an outlier.



Per capita public funding of public media in US dollars. Source: Benson and Powers (2011), estimates from 2007 to 2009.

In the US and elsewhere, a growing number of researchers are advocating increased public funding.[93] Most recently, the Cairncross Review recommends first direct funding for local public-interest news outlets, and second the launch of a new innovation fund. A salient argument in opposition to such public funding is the threat to editorial independence. In this section, we propose a "private media voucher" system—funded with public money—to remedy some of the biases that increased public funding of media may induce. We first present our proposal, describe its advantages and shortcomings, and then discuss why we do think that the media voucher system is better not only than the status quo, but also than other

[93] McChesney & Nichols (2010); McChesney & Pickard (2011); Bollinger (2010).

propositions than have been made recently to guarantee a sustainable future for journalism.

Existing Subsidies Schemes

There are plenty of examples around the world of government support of the media. While American subsidies to both the press and audiovisual media (e.g., the postal subsidy) are low and have fallen sharply over the past few decades, the US was historically the very first country to introduce subsidies to the press.

The most commonly used subsidy scheme today is the reduced value-added tax (VAT). In most European countries, newspapers indeed benefit from a reduced VAT (although a challenge in many countries remains the extension of the reduced VAT to digital publications). Although it is widely believed that UK newspapers are not subsidized by the government, they in fact pay zero VAT, which amounts to an effective subsidy of several million pounds each year. Furthermore, a number of European countries have also introduced both indirect and direct subsidies to newspapers. Subsidies can be either neutral or discriminatory. Sweden, for example, offers both an operating subsidy and a distribution subsidy; Norway subsidizes the newspaper that is second in circulation in each local market, the smallest paper in certain isolated regions, as well as a national paper that offers dissident and controversial political views; while France offers delivery subsidies and pluralism subsidies, as well as modernization subsidies.[94]

Even in countries where press subsidies are relatively low—as in the UK—the state intervenes in the media through subsidies to the audiovisual sector. The funding of public broadcasting can take different forms, e.g., license fees, income tax charges, parliamentary grants, etc., depending on the countries.

In late 2018, Canada's federal government introduced a tax package worth CAN$595 million, rolled out over five years, in support of journalism.[95] It includes (i) a temporary, non-refundable tax credit that will allow subscribers to claim 15 percent of the cost of subscriptions of eligible digital news media; (ii) a new category of "qualified" donor for nonprofit journalism; and (iii) a refundable tax credit for qualifying news organizations that "produce a wide variety of news and information of interest to Canadians."

At the local level in the US, in July 2018, the state of New Jersey decided to give $5 million in funding for innovative projects to improve local news in the state.[96] The public funding will go through the New Jersey Civic Information Consortium, a nonprofit news incubator.

Notwithstanding this growing interest for government subsidies to the media, we think that there are good reasons why there is little public aid for the press in the US as of today. Public funding of news can indeed threaten media editorial independence. We accept this criticism. Given that we have documented in this report that media are in need of new financial resources, we propose an innovative model: publicly funded media vouchers that are privately allocated.

Our Proposal: Media Vouchers

Our proposal to provide public funding for the news media can be summarized as follows: We propose to give each adult a media voucher worth a certain value—$50 in our favorite

[94] Cagé (2015).

[95] https://www.niemanlab.org/2018/11/canada-introduces-a-595-million-package-in-support-of-journalism/

[96] https://www.niemanlab.org/2018/07/water-in-a-news-desert-new-jersey-is-spending-5-million-to-fund-innovation-in-local-news/

proposal—per year from the US Treasury, to donate to her favored media outlet(s).[97] This proposal is in the spirit of the "vouchers for equal democracy" proposed by Cagé (2018) (a €7 voucher given each year to each citizen to fund the political party of her choice), as well as the "democracy vouchers" advocated by Lessig (2015) (with a specific focus on elections) and implemented in Seattle for local elections (we discuss below the lessons from the Seattle experience).

This system would work as follows. Every year, when filling her tax returns, each citizen indicates to the tax administration the media outlet(s) to which she wants to allocate her media voucher. The vouchers can be split in up to 10 different $5 vouchers. Technically, to preserve anonymity, this should work like electronic voting: each citizen is provided with a token and the allocation choices should not be linked to the addresses of the token holders (there exist many protocols of anonymous voting on blockchain-based networks that could be used). Resale of the media vouchers will be forbidden by law.

Which media outlets could benefit from the media vouchers?

We want to guarantee that the list of media outlets eligible to receive voucher funding is as extensive as possible, so as to be sure there is no threat regarding media independence, and that the vouchers are used to fund the production of information (and not of entertainment, for example). We also want to guarantee a high degree of pluralism.

To guarantee that these public subsidies actually subsidize the production of information—and in particular the production of high-quality information—we impose a small number of conditions. To benefit from the media vouchers, the media outlets have to:

- Hire at least one journalist. This will in practice exclude from the benefit of the media vouchers all aggregators that do not produce any original content. While this threshold may seem too low, we have chosen it on purpose, following the criticisms faced by the Canadian subsidy model described above. To qualify for the subsidies in the Canadian model, media have indeed to "employ more than two journalists as employees." This excludes small news startups.[98] We think that small startups should not be excluded; this is all the more important given that a key priority should be to fund local journalism; at the city or even the county level in the US, media outlets have very small newsrooms.

- Mostly produce general-interest news. In the majority of the countries where public subsidies exist, there are some conditions associated with who can benefit from them. In France, for instance, to qualify for the majority of the subsidies, media outlets should obtain the "*Information politique et générale*" label. Our approach to "general-interest news" is rather large here; the media vouchers could, for example, be used to fund media outlets that specifically focus on a given topic, e.g., the economy or the environment. Moreover, importantly, we do not condition the format of this news (it can be print, but also audiovisual, etc.). What is important is that general-interest news is actually produced; we think that it may be a good thing to have various production formats. We simply want to guarantee that the vouchers are not used to mostly finance the production of non-news content.

- Be transparent. The modern media industry suffers from a lack of transparency.

[97] We propose here a $50 voucher to keep the total cost reasonable.. As we have highlighted in this report, high-quality information is a public good, and this public good suffers from critical underfunding.

[98] https://www.niemanlab.org/2019/03/instead-of-helping-canadian-news-startups-a-new-government-subsidy-will-only-prop-up-failed-models/

This lack of transparency—in particular regarding ownership—partly explains the very low trust in the media (which we observe not only in the US but also all over the world). Hence for the media outlets to be able to benefit from the media vouchers, they will have to annually publish online (as well as in their print version, for the newspapers) the following information: (i) the detailed list of their owners, for each shareholder with more than 1 percent of the capital shares; (ii) for each of these owners, their main source of revenues (to avoid conflicts of interest). Moreover, they will also have to publish their annual balance sheet. Finally, they will have to make public their articles of association, with detailed information regarding the governance structure. We think that introducing such transparency is important; this condition is along the lines of the public funding of political parties. In Italy, for example, to benefit from the "due per mille" system, political parties have to publish their accounts, their status and the list of their donors.

- Be ethical. Finally, while the media outlets meeting the previous criteria will be eligible for media voucher funding independently of their political bias or the tone of their coverage, we think it is nonetheless important to introduce an ethical code created by news media stakeholders. The idea behind such a code is simply to avoid the public funding of disinformation and other harmful content. Compliance with the code will be assessed on an annual basis and the media outlet will have due process and a chance to appeal any adjudication of violation. If a media outlet loses its media vouchers status in a given year, it will nonetheless be considered again the following year (so as to avoid the creation of an opposition from a number of media outlets, which could use their "victimization" status).

Finally, an independent body—which we could call, for example, the Independent News Monitor—will be in charge of validating on an annual basis the exact list of the media outlets that meet these criteria and administering the ethical code. Key is the independence of this body; we believe that it should include representatives of journalists and of media owners, as well as scholars. These members should be named for a four-year nonrenewable term. (This will be, for example, in the spirit of the aforementioned Cairncross Review's proposal to create a new Institute for Public Interest News.)

Obviously, other conditions could be in principle introduced, for example, that to qualify for the media vouchers, a media outlet may not rely for more than a certain share of its revenues on advertising revenues. We leave this dimension for discussion, but we believe nonetheless that the lower the number of conditions, the better.

A focus on local media outlets

In the baseline version of our proposal, all media outlets, as long as they satisfy the previously listed conditions, could be eligible for media voucher funding. We are well aware, however, that local media are currently struggling much more than national media. While a number of national outlets have recovered their audience in recent years—in particular newspapers through the rise in digital subscriptions—and while they still rely on advertising revenues (even if declining), the business model for local news is gone. In print media, the traditional economic model of a local newspaper was to bundle diverse types of content, such as local news, national news, classified ads, etc., into a single product to sell to consumers.[99] But digital platforms have weakened this approach. Classified ads have moved to specialized online outlets (e.g.,

[99] See Angelucci, Cagé & Sinkinson (2017).

craigslist.com or monster.com), and soft news about local communities is now provided free of charge on social networks such as Facebook. Similarly, national and international news is now provided almost exclusively by a few of the largest news outlets.

According to a study released in 2018 by the University of North Carolina's School of Media and Journalism,[100] more than one in five local papers has closed in the US over the past decade and a half. Almost 200 counties in the US have no newspaper at all. Importantly, as highlighted in the study, "the people with the least access to local news are often the most vulnerable—the poorest, least educated and most isolated." In a recent conversation (May 2019), *New York Times* executive editor Dean Baquet said, "The greatest crisis in American journalism is the death of local news."[101]

Hence, we think that financial support is of particular urgency for local media. We thus propose the alternative allocation mechanism: to favor the funding of local journalism, citizens should allocate at least half of their vouchers—and can allocate up to 100 percent—to fund local media outlets.

What happens if a citizen decides not to allocate her voucher?

Obviously, it may happen—even if allocating the media vouchers costs citizens nothing—that a significant fraction of taxpayers decide not to allocate their vouchers (similarly to what happens, for example, with the "presidential fund" in the US: most people do not check the box). Given that we believe it is important that there is a high enough amount of public funding devoted to the production of high-quality news each year, we think that the vouchers should nonetheless be allocated in this case.

Hence, we propose the following rule: in case a citizen does not choose a media outlet to which to allocate her voucher, then her voucher will be allocated as a function of the allocation of the other vouchers. We think this is the best allocation rule: it relies on the preferences expressed by the citizens and avoids any government intervention.

An alternative allocation rule, to favor the production of local news, would be to allocate these vouchers as a function of the allocation of the other vouchers but only among the local media outlets (in the spirit of the scheme described above).

How can concentration be avoided?

A possible caveat of our scheme is that it could potentially lead to the allocation of the large majority of the media vouchers to a small number of media outlets, in particular to the best known outlets at the time of the scheme's implementation, while these outlets may not be the ones most in need of public funding, and while we want to favor competition. To avoid such hyperconcentration and guarantee pluralism, we introduce the following threshold: a given media outlet cannot receive more than 1 percent of the total number of media vouchers. In the US, which includes around 260 million adults, no media outlet would be allowed to receive more than 2,6 million vouchers (i.e., $130 million).

What will happen in the event of an "over-allocation", i.e., when more than 1 percent of the adult population decides to (simultaneously) allocate its media vouchers to the same outlet? Then, in this case, we follow the same rule as the one described above in the

[100] https://www.usnewsdeserts.com/reports/expanding-news-desert/

[101] https://www.inma.org/blogs/world-congress/post.cfm/trump-vs-new-york-times-the-executive-editor-s-perspective

case of non-allocation: the media vouchers are allocated as a function of the allocation of the other vouchers, but only among the media outlets that are below the 1 percent threshold. (Obviously, we can discuss the "optimal" threshold; 1 percent may be too high, and a 0.5 percent threshold may be seen as preferable. We may need a higher threshold especially for smaller countries.)

Note also that, as we highlighted above, we allow the citizens to split their vouchers; while the face value of one voucher is $50, if they wish to, they can split it into up to ten different $5 vouchers. This should stimulate pluralism, as well as buttress the scheme where at least half of the voucher has to be allocated to fund local media (see above).

Will the vouchers make a difference?

Note that while we want to make sure that the vouchers won't be concentrated among a small number of successful outlets, we nonetheless also want to assure that the vouchers will be an efficient tool that will allow existing or new news outlets to produce high-quality information that citizens can consume.

The $50 media vouchers will guarantee that this is indeed the case. Take the "extreme" example of a large and successful newspaper, the *New York Times*. Given that a single media outlet cannot receive more than 1 percent of all the vouchers, the maximum amount that could be received by the newspaper is equal to $130 million. The typical *New York Times* reporter's annual salary is around $110K (which involves a full cost of around $130K for the newspaper). Hence $130 million corresponds to around 1,000 reporters, a number that has to be compared to the 1,450 journalists who work as of today for the newspaper. The $130 million figure also corresponds to less than a third of the total spending on wages and benefits of the company. Hence, even for a large, profitable media outlet such as the *New York Times* ($112.4 million in operating profits in 2018), the media vouchers could make a difference.

Why do we advocate media vouchers?

We believe that media vouchers are the best scheme that could be implemented in the future to provide funding for themedia. They present a number of important advantages compared to existing schemes. In this section, we will argue that they are better not only than the status quo, but also than other proposals that have been made to sustain journalism in the future.

Media vouchers and the status quo

The status quo obviously varies from one country to the other. We have highlighted above the existing public subsidy schemes. These schemes are relatively important for existing print media in European countries such as the Nordic countries and France, while they are nearly nonexistent in the UK. The UK government nonetheless spends a great deal of public money to fund the BBC each year.

From a direct public funding point of view, the status quo in the US is almost the complete absence of funding. However, public money is invested indirectly in the media through tax deductions associated with philanthropy (see below). In the first part of this report, we have highlighted the gradual decimation of the business model that enabled many news outlets to produce investigative journalism for decades. If one believes—and we believe—that the journalism crisis raises growing threats to democratic values and institutions, then we need to confront the status quo. In a word, we need to find alternative resources for journalism.

One could argue that in this case, it will be enough in European countries that already subsidize their media to increase the existing amount of public funding (while preserving the existing schemes). We think that we can do better. The main advantage of our public funding (media vouchers) scheme over existing ones is that it offers a solution to the threat usually—and sometimes quite rightly—associated with **public funding of news**: With media vouchers, dependence on public funding won't compromise the independence of the media. The state intervention will indeed be "neutral": all media outlets will be treated equally, without distinction as to content or opinion. In other words, there will be increased *public funding without application of government discretion*. This advantage results from the fact that in our model the media vouchers are allocated by citizens themselves. Hence we believe that in countries that today provide direct subsidies to their media outlets, it will be preferable in the future to use the same amount of money but allocate it through media vouchers.[102]

Some maintain that from this point of view **tax relief** does not compromise media independence. That is strictly right. But we think that vouchers are nonetheless preferable to tax relief for at least two reasons. First, tax relief disproportionately benefits large media and, depending on the tax relief scheme, large media that are profitable. Media vouchers, on the other hand, will help financially support not only large but also small media, from their emergence onward, and help ensure pluralism. Second, we believe that an additional advantage of vouchers is that they may help reconcile citizens with media. Media suffer from a lack of trust; part of the distrust comes from the fact that citizens doubt that media are independent, in particular because of their funding (either advertising revenues or ownership). Conversely, with media vouchers, citizens would be directly involved in media funding. They may obtain information on the ownership of each media outlet (given that outlets will have to publish the detailed list of their owners—see above). They may decide to support the more independent outlets. This may help at least to partly reduce the **confidence crisis** and reconcile citizens with their media.

In the US, while there is a shortage of *direct* public funding of the media, we have observed in recent years a rapid increase in philanthropic funding. Hence some argue in favor of the status quo and defend a reform that would facilitate and give more incentives to **philanthropic funding of the media**. One way to do so could be to increase the magnitude of already existing tax deductions attached to philanthropic donations (which include donations to nonprofit media). We have already highlighted above the shortcomings of philanthropic media funding: philanthropists may be benevolent players in the news ecosystem, but they may also have their own agenda and limited interests.

Of course, we are not arguing against philanthropic funding. But rather than using even more public money to financially support wealthy individuals willing to finance the news ecosystem, we think it is preferable to spend additional public money to give to *all citizens*—rather than only the wealthiest—the resources to sustain financially the media outlets of their choice. The issue here is again the one of optimal allocation of resources. A handful of billionaires are no more legitimate than the state to allocate public resources to the media of their choice. To ensure pluralism and preserve media independence, we think it better to decentralize this allocation and leave it with all citizens through media vouchers.

[102] Our media voucher scheme could potentially be extended to the aid flows donors direct to the media sector abroad (around $454 million per year of official development assistance), and in particular in sub-Saharan Africa. While there are concerns regarding the way this support is allocated, an innovative scheme—which would reinforce media accountability with respect to citizens—would be to allocate these funds directly to the citizens in the form of vouchers, so that they could subscribe to or sustain the outlet(s) of their choice.

Media vouchers and alternative funding models

Another alternative to reconcile citizens with media and to sustain the journalism industry—in particular in countries where information is not only underproduced but also underconsumed—would be for the government to **offer to each citizen a free subscription** to a media outlet.[103] Compared to that alternative, our media vouchers proposal has at least two advantages. On the one hand, privacy is preserved (given anonymity, there will be no public information on who allocates vouchers to which media). Second, many media outlets offer free content and do not rely on a subscription model. These outlets would be de facto excluded from the benefit of the subscription alternative, while they could benefit from the vouchers (and we think they should).

Obviously, one possibility could be to combine the voucher model with the free subscription one; hence, we could decide that when a citizen allocates her vouchers to a media outlet, if the outlet's content is behind a paywall online or is a print medium to which one needs to subscribe, then she will automatically obtain a free subscription to this media. We think it would be interesting to also consider this dual model.

Note also that we believe that the proposals made recently (e.g., in the Cairncross Review), as well the current philanthropic support of news, have been focused too much on "**innovation**." We believe that even traditional journalism needs to be funded; the focus should be more on quality news, and less on the technical means used to deliver it.

We also believe that there is no reason to focus exclusively on large investigations that require a great deal of resources. Obviously, we need such investigations but, in particular at the local level, there is also a shortage of day-to-day journalism with deeply locally involved journalists, who sit through most often "boring" government meetings.

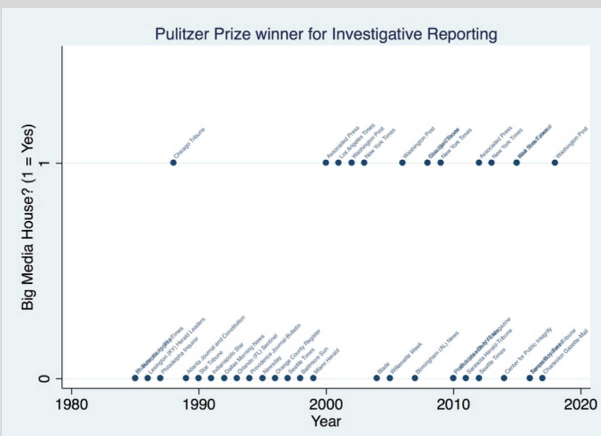
We want to emphasize this need for day-to-day journalism. Local journalism is of particular importance in fighting corruption at the local level. Absent local journalism, important events such as council meetings and court hearings are not covered. At the local level, journalists are the only democratic watchdogs—while at the national level there are many more whistleblowers and social media are used as a way to propagate information. Furthermore, local journalism matters not only with respect to politics, but also daily life activities and quality of life more broadly. Historically, local reporters have been the one in charge to publish on the front page a plan to close a local swimming pool, a school or a library. Finally, more local news is also associated with higher voter turnout at local elections.

Large prizes for investigative journalism can be an efficient mechanism to incentivize the production of the specific kind of journalism that democracy needs. They can be complementary to our proposal of increased public funding—but they are not enough. Media outlets are not suffering as of today from a lack of incentives to get a Pulitzer prize; they are suffering from a lack of resources to do journalism, and we observe journalists who at the time of receiving their Pulitzer are working as PR consultants, either because they have been laid off or because journalism's level of pay has driven them out of their job.

[103] For example, in 2009, the French government gave teenagers a year's free newspaper subscription on their 18th birthday. This experience was considered a success; however, it has not been renewed.

Box 8: Investigative Journalism and Prizes

Relying solely on large prizes to promote investigative journalism creates the risk of creating a superstar media industry, where a few media firms with ample resources hog the limelight. Investigative journalism today has already become like a superstar industry: Until the start of 21st century, local newspapers were the regular winners of the Pulitzer Prize for Investigative Reporting. Since the 2000s (with the dawn of the the Internet age), the Pulitzers have been dominated by superstar newspapers like the *New York Times*. In other words, large prize based incentives cannot be a cure for one of the key aspects of the media crisis: death of local investigative journalism.



Note finally that the $50 voucher level advocated here is not meant to be the only possible level. One could think of higher or lower levels. This is an issue that requires extensive deliberation and experimentation and that we do not plan to settle here.

For the sake of comparison, the licence fee that is used to finance the BBC in the UK is currently equal to £155 per citizen/year. In France, the corresponding *redevance audiovisuelle* amount is €139. In Germany, the public TV licence fee is €210 per year (€17.5 per month).

However, as highlighted above, the main issue with European-style public media funding is that public subsides may open the door for manipulating journalists and inducing pro-government media bias. This threat to editorial independence may explain why the US has been reluctant in recent decades to publicly fund the media. Our proposal opens a new path to supporting the media from the US Treasury without government discretion.

Lessons from the Seattle voucher experience

As noted above, the inspiration for the media vouchers proposal comes from both the "vouchers for equal democracy" proposed by Cagé (2018) and the "democracy vouchers" implemented in Seattle for local elections. Hence, it is of interest to draw the lessons from the Seattle experience.

In January 2017, the city of Seattle implemented a "democracy vouchers" system to fund the local elections. In January 2018, all registered voters were mailed an envelope containing four $25 democracy vouchers that they could donate to local political candidates of their choice. These vouchers were taxpayer-funded. To benefit from these vouchers, candidates had to agree to certain limits (with the maximum contribution to candidates set to $500; the initial goal of the vouchers was to get big money out of politics).

Even if hard to evaluate scientifically, this experience is considered overall as a success. First, six candidates benefited from the vouchers and 46,000 vouchers (corresponding to around $1.1 million) were allocated. Second, the candidates who benefited from the vouchers were generally successful at ballot box. Finally, the vouchers shifted the donor pool in an egalitarian direction relative to the pool of cash donors.[104] In particular, Brian J. McCabe and co-authors documented an increase in involvement by underrepresented groups. This increase is of particular importance for us here. Indeed, the objective of our media vouchers is not only to bring necessary resources to the media, but also to rebuild confidence between citizens and media, and to incentivize people to consume more information. This is particularly important for those who tend not to consume much information.

The limits of media vouchers

Of course, media vouchers alone are not going to solve the journalism crisis entirely. In particular, while they bring a solution on the production side, they would have little *direct* impact on the consumption side. In other words, while media vouchers will lead to the production of more high-quality information, we cannot ensure that it will be consumed. Nonetheless, the voucher allocation may lead to an increase in news consumption. Having to choose on an annual basis which media outlets they want to allocate their media vouchers to may indeed raise citizens' interest in news. The vouchers may also help reconcile citizens with media.

Should we be worried that citizens will "misallocate" their vouchers, in the sense that they may decide to allocate them to media outlets that produce relatively more entertainment and relatively less information, or to media outlets that are biased toward a political party? In other words, can we be sure that the media vouchers system will only support the quality media a social planner would like to support? We cannot know ex ante what will be the result of the allocation—and this is why it could make sense to pilot the voucher system in a small number of states to begin with. But we think it is essential to have such a *decentralized* allocation, with no government discretion, for two reasons: First, we do not think that the government will do better than citizens at allocating media vouchers, and will likely do worse. Second, we think that this decentralized allocation will be at least as good as what the market alone would do. Note that if the citizens most interested in news are also the ones who most likely to allocate their vouchers, then the decentralized media voucher allocation would most probably lead to more funding of high-quality information than today's market outcome.

Subsidizing inputs versus outputs

Production of journalistic content involves resources—talent and capital—representing fixed costs that must be incurred to generate news of value. Like many informational goods, the benefits and costs of this endeavor can be aligned in two broad ways. First, additional incentives can be created to compensate journalists upon the production of news content. Second, subsidies can be provided to compensate for the costs of producing that content.

In terms of approaches each has tradeoffs. Rewarding journalists based on some measure of the value of news output has the advantage of creating relatively high-powered incentives to actually produce news output with the ascribed value. By contrast, subsidizing journalists' costs risks insufficient effort being directed at providing news content.

The flip side of this tradeoff is a practical matter—one of measurement. How do you measure the value of news content produced in order for it to represent a clear

[104] See in particular McCabe (2017) and McCabe & Heerwig (2018).

reward to journalists? At present, that is done by attracting and monetizing attention. However, as noted already, the rewards from this are likely to be insufficient for certain types of content with high public value but low mass market appeal. By contrast, while costs pose their own measurement challenges, costs vary across journalistic endeavors in relatively known ways—salaries of journalists, travel, etc.—and certainly by less than the variation in the value of news output. Thus, a relatively simple subsidy can stimulate activity.

For these reasons, we have posited a mechanism that is primarily based on subsidizing inputs rather than directly rewarding outputs. That said, there is an indirect mechanism in our approach. Citizens will be loath to provide subsidizes to news outlets that are not producing news content. In other words, while there are static concerns that subsidies may be ill spent, the dynamic consequences should mitigate those concerns. This is the very same balance that we strike when subsidizing other information public goods such as basic scientific knowledge.

REGULATION OF MEDIA CONCENTRATION

Citizen Welfare Standard

Concentration in the media sector creates standard problems associated with a lack of competition in economic markets. These problems include, among other potential harms, lower quality products and higher prices for consumers. Given the two-sided nature of media markets, high levels of concentration in the media sector might also create inefficiencies in the advertising market, with advertising prices set too low. Increasing competition makes prices for consumers fall and product quality increase. These changes lead to increases in standard measures of consumer welfare.

The subcommittee argues that these standard measures of consumer welfare miss key additional benefits of competition in the media sector. These benefits are incorporated into citizen welfare, which recognizes the centrality of the media, and increasingly digital media, to the democratic process. Moreover, these benefits are not typically incorporated into existing regulatory practices.

Concentration and Media Capture

A distinguishing feature of media is that they should provide citizens with the information needed to keep governments and other political and economic powers accountable. Of course, powerful individuals usually prefer not to be held accountable and may use threats, promises, and other tactics to induce private media outlets to distort and suppress information. This phenomenon of media capture has been documented in a number of contexts and countries.[105] It often involves an informal understanding between owners of private media outlets and public officials: media outlets will produce news coverage that is favorable to the government, and the government will reciprocate with a policy that is favorable to media outlets. Media capture is not limited to political news: Commercial interests, too, can try to distort financial reporting to their advantage via advertising and other means. Once in a while, the mechanisms behind media capture are revealed to the public, as in the case of the Leveson Inquiry in the UK or the secret recording of the conversation between Benyamin Netanyahu and Arnon Mozes in Israel.

How can media capture be prevented? The kind of informal understanding between media owners and public officials described

[105] Schiffrin (2017).

above is more difficult to achieve if it requires securing the assent of a large number of owners, especially because a news source that maintains appropriate distance from the state and powerful business actors might gain an audience by being trusted to speak truth to power.[106] Keeping a low level of concentration in the media industry is thus likely to be an effective defense against media capture. These benefits of competition are captured in citizen welfare.

Inadequacy of Existing Regulation to Prevent Concentration in News Provision

Media concentration is usually achieved through serial acquisitions. Rupert Murdoch's media empire in the US, UK, and other countries is a case in point. The natural remedy is regulation against excessive concentration. However, there is a growing consensus that current regulation is inadequate to achieve this goal, especially in the context of digital platforms.[107] This point is recognized by economists, regulatory authorities, and law scholars.

The current debate on the risk posed by digital platforms sometimes seems to imply that before the Internet era the world was in a golden age of free, pluralistic and independent media. However, almost every democracy in the world had high levels of concentration for television, newspapers and radio during the 1990s. Ownership was typically in the hands of either a state-owned entity under the direct control of the government or a small number of private companies, often owned by government-friendly oligarchs.[108] The most notable exception to this situation was arguably the United States in the second part of the 20th century, when the news industry displayed low levels of concentration and was mainly perceived to be non-captured. As we shall see next, that was the product of a technological and regulatory environment that no longer exists.

The existing media merger regulatory regime contains two sets of rules, both of which are inadequate for different reasons. The first set of rules involves platform-specific restrictions on media ownership. Many countries, including the US, have prohibitions against excessive ownership within one particular medium, like terrestrial television. These rules were effective when the set of media platform was small and stable. But difficulties with this approach emerged when cable television was introduced, and then further intensified with the advent of the Internet. In a world where the number of media platforms is expanding and the distinctions between them are blurring, those rules look arbitrary and obsolete. Even worse, there is no obvious way of extending them to include all news-providing platforms.

The other source of regulation is standard competition policy. The problem is that this powerful principle-based set of rules is chiefly meant to protect consumer welfare, as described above. In particular, a merger between media companies is blocked if it is likely to lead to higher prices, lower quality, or some other direct harm to consumers. While this criterion is important and should continue to exist and be applied, it does not cover the indirect harm that a media merger can impose on citizens through an increase in the risk of media capture, as described above.

[106] Besley and Prat (2003).

[107] Polo (2005), Ofcom (2009), and Prat (2015).

[108] Djankov et al. (2003).

Our Proposal: A Quantifiable Citizen Welfare Criterion for Reviewing Mergers between News Providers

This subcommittee believes that transactions that affect the level of media concentration should be evaluated according to a citizen welfare criterion, alongside the standard consumer welfare criterion. Namely the relevant authority (to be discussed below) should block mergers that significantly increase concentration in news provision, not because they would increase prices or improve product quality but because they impose an increased risk of media capture.

This assessment can in part be made on the basis of objective measures. Recently, both economic theory and regulatory practice have proposed a similar index of media concentration based on attention shares.

On the theory front, researchers like Prat (2018) have proposed a media power index, based on the idea of attention share. The attention share of a news source is first defined at the individual level as the percentage of time that the individual devoted to a media source divided by the total time the individual devotes to all sources. The overall attention share of a source is then defined as the average attention share that the source commands across all voters in the country.

On the regulatory front, in 2018 the UK's Competition and Markets Authority made a landmark decision.[109] The CMA blocked the proposed acquisition of Sky by 21st Century Fox because of a "media plurality consideration." Crucially, the hypothetical effect on plurality was assessed quantitatively. A key element of the assessment was the share of reference metric which is virtually identical to Prat's attention share definition. It showed that the proposed merger would have created a new entity with a larger attention share than of the existing commercial news providers.

The attention share approach has three advantages. First, it is platform-neutral. The unit over which concentration is measured is not a specific platform, but rather citizens' news processing bandwidth. This makes the index robust to the addition of new media or the blurring of borders between two existing media. Second, citizen welfare provides micro-foundations for the measure. In particular, Prat demonstrated that the attention share of a news source determines the upper bound on the ability of that source to influence the voting process through media capture: by putting a cap on attention shares, the regulatory authority can control the worst-case scenario for voters. Third, attention shares can be computed—or at least approximated—with existing data, as the CMA did in the UK and as Kennedy and Prat did for 36 countries.

The attention share approach can be applied to local media, too. Suppose two local news sources wish to merge, or perhaps two media conglomerates that both own a large number of media sources wish to merge, as in the proposed acquisition of Tronc by Sinclair. National-level concentration is obviously not the right measure. Attention shares must be computed in each of the local media markets that would be affected by the merger, with specific reference to local news.

Obviously, the attention share approach is no panacea. At least two important caveats apply. First, just like other concentration indices, such as the Herfindahl index, it should be the beginning, not the end. For instance, it could define thresholds above which the regulatory authority must initiate a plurality investigation.

Second, ownership fragmentation is not the only form of plurality. It is also important

[109] Competition and Markets Authority (2018).

that news providers represent the diversity of views and interests in the population. For that goal, however, the right tool is increased public funding, which is discussed in the previous section.

Box 9: Which Regulator Should Enforce Media Plurality?

Which agency should be given the authority to block media mergers on the basis of plurality considerations? The two natural candidates are the default antitrust authority and the media regulator. The advantages of the latter option are that a media regulator could acquire specialized knowledge in this area and that it would not impose an additional task on the antitrust authority. The potential drawback is that, because of revolving-door practices, industry regulators are often more prone to capture than the antitrust regulator. Joint responsibility between the two agencies is also a reasonable option. In the UK case, the analysis was carried out by Ofcom and the final decision was made by the CMA.

INCREASING THE TRANSPARENCY OF DIGITAL PLATFORMS

Today's Internet has brought with it a fragmentation of where people get their news. There is no longer a single or small set of outlets that command consumer attention. Instead, consumers divide their attention across outlets. This has been facilitated by social media, which aggregate news from a variety of sources. The benefit of that is that there is potential for a greater diversity of outlets and also, potentially, a diversity of where news can come from. The cost is a lack of transparency. To see this, consider individual news items aggregated by social media. While some broad source for those news items is given, because consumers may be one-off or, at best, highly intermittent consumers of the media outlet, the source of those news items is not readily apparent or top of mind for consumers. It is not easy to evaluate bias in the news or the reputation of the journalists who generated it. As a consequence, the reputation mechanisms that might ensure that high-accuracy news is screened from low-accuracy news break down, with the adverse consequences outlined above.

Moreover, there is even less transparency with respect to editorial content. As mentioned earlier, the choice of editors in terms of what to prioritize was very transparent when news outlets had a single product. Today, those choices are hidden within algorithmically optimized personalization used by social media for that purpose. Thus, if there are biases in the presentation of news or omissions of certain types of news content, it is not readily amenable to investigation. To be sure, personalization has many other benefits, but one of the costs is a loss in transparency whereby the choices made by editors or algorithms can be laid bare for scrutiny. This further exacerbates the impact of information asymmetries in the news.

Box 10: Economics of News Quality

News dissemination invariably involves someone other than the news consumer evaluating evidence and facts and filtering those to provide the essence of the news to consumers who have limited time and attention to delve deeper into the subject. Hence, news providers know more about how the news was filtered and how well the facts support the summarized contentions than do consumers of the news.

An efficient news market would allow the consumer to take the story at face value, but, even in inefficient markets, if there are other voices in the market, those voices can conduct their own investigations and check for distortions. So long as those voices are active, the distortions can be brought to light. This has the initial effect of reducing the 'harm' that the distorted news story itself might generate. However, it also has a longer-term effect of reducing the reputation of the news outlet that produced distorted news. This causes fewer consumers to rely on it as a source of news. In other words, outlets have an incentive to develop a reputation for quality, but this incentive only operates if multiple voices and interests can check for deviations from that quality and bring them to light.

In performing its functions as a check on power and authority—whether public or private—the reliability and trustworthiness of the news are critical. However, since the digitization of news content, it has become harder to determine the sources of particular news items or why they might be given priority by certain outlets. Prior to digitization, most news came from outlets that offered a single product to large numbers of consumers. While particular news sources might be hard to identify, the responsibility for the publication lay with the outlet, and, hence, the outlet could be the bearer of a reputation for accuracy. The issue in the reputation mechanism working was whether exit (that is, consumers leaving outlets with a reputation for lower accuracy) served to discipline all outlets for higher accuracy. In other words, the challenge was having enough outlets to provide competitive discipline for each of them. Moreover, ownership and other aspects of bias could be identified and examined. Finally, the editorial decisions as to what news received priority were transparent because the same product was received by all consumers.

Our Proposal: Transparency Requirements and Voluntary Labeling

Transparency Requirements

We propose two broad mechanisms that can be used to reduce the crisis in transparency we see today—transparency requirements that provide longer-term information on editorial credibility and other factors, particularly in terms of algorithmic editorial choices, and voluntary labeling that provides underlying information on news sources and carries information on trustworthiness.

There should be transparency around platform editorial decisions. Recall that because consumer attention is scarce, editorial decisions about prioritizing information can direct attention in ways that effectively set the news agenda for the individual. To deal with this issue we propose mandatory transparency about aggregate news targeting, audience reach, ownership, and sponsorship so that individuals, researchers, and civil society groups can understand the forces shaping the news agenda. Covered entities would include existing dedicated news outlets of a certain size, as well as the largest social media sites such as Facebook and Twitter and the largest aggregators such as Google and Apple. The goal here is not to regulate those decisions but to provide visibility into them so that consumers and others can understand editorial decisions and policy—potentially impacting the choice of where they obtain their news information.

The outputs of this transparency would be threefold:

1. The production of periodical reports on aggregate news distribution and consumption on the Internet and how it is influenced by the changing design of the algorithms that control the news feed. For example: anonymized data on the reach of media content and data explaining those information flows.

2. Alerting the public to patterns of news and information consumption (typically of a viral nature) that amplify disinformation, hatred, incitement, or seek to harm democratic processes and institutions.

3. Making certain kinds of internal reports and analyses that platforms have on news consumption available to regulatory agencies and legislators.

To minimize the natural tendency of any media regulator to be captured by platforms, we propose that in addition to the periodic real-time reports, all data obtained by the regulators, its internal decisions and its interactions with the platforms should also be available to the public after a three-year delay.

Box 11: Possible Transparency Tools

1. A public feed, with minimal algorithmic optimization.
2. A private dashboard to users so they can summarily see the nature of their feed (including the content they see, and the content they don't see).
3. An API to let users customize their own news feed based on their preferences and knowledge about algorithmic priorities.
4. A public dashboard visible to the public so they can summarily see the nature of a feed in a given location or globally (like Twitter Trends, but with less editorialization).
5. A more granular dashboard visible to a regulator so it can see how the algorithm customizes a news feed for different clusters/groups of users.

Labeling

The information asymmetries that pervade news dissemination resemble others consumers face in evaluating product quality. News is a "post-experience" good whose quality often cannot be assessed until after it has been experienced as true, prescient, enlightening, or not. Labeling of a news source—that is, who has produced it and what entity owns or funds it—is a strategy to reduce post-experience costs. It allows consumers to evaluate the news product before consuming it. Newspaper bylines and mastheads, as well as broadcast ownership reports, all served the function of signaling to consumers the quality of the news source they were getting. Digital intermediation has made these signals fainter, and new digitally native sources often have no labels at all. For instance, it is often difficult for consumers to rate the energy consumption of household appliances. For this reason, governments and nonprofits around the world have developed certification processes whereby manufacturers can have their products tested and a certified label affixed. This gives consumers the confidence to purchase products based on more information.

For the news, it would not be possible to certify the accuracy of individual news items. However, as the goal is to ensure that consumers have the information necessary to evaluate the news, what could be certified is the source of the news and whether the providers meet certain standards. To be sure, what we are proposing here is not government licensing of news outlets. Indeed, the quality certification could be conducted entirely privately. To give consumers confidence to purchase or consume news products with more understanding of the source of the news, we propose a voluntary labeling scheme administered by an independent news monitor. This will allow consumers to quickly obtain information about the interests of the provider (including ownership and conflicts) as well as provide a way to affix market-based reputations to different news sources.

News outlets that choose to can submit ownership and sponsorship information to the independent news monitor to run the labeling mark. When examining any individual news item, what consumers will see is whether the source of that item has submitted the information. Not having a label does not affect publication of news or even representation of content as news on the Internet. So, it is not a free speech impediment, and it is fully voluntary. For news outlets that wish to exhibit independence so as to provide confidence in the accuracy of their reporting, labeling will be valuable. Some outlets will not want such certification. Consumers will decide how much weight they place on this factor in news consumption. The broad goal is to give consumers, who need to rely on news for debates and decisions, a fighting chance at understanding the interests of those providing the information. This label, of course, could cover other forms of information, including declared interests in advertising and other revenue. However, we do not take a particular position on the complexity of the labeling scheme here.

The government or a standard-setting body might have to help provide a technical standard by which labeling could be associated with news items published on the Internet. This is a technical challenge, but it is one that has been solved previously on the Internet with respect to e-commerce. In summary, we propose establishment of an independent news monitor that can provide trusted information on news sources at the point of publication for any news item.

INCREASING ACCOUNTABILITY OF DIGITAL PLATFORMS

Section 230 of the Communications Decency Act provides digital platforms with immunity from certain legal claims arising from the content on their networks. This immunity has proven to be an enormous effective subsidy for these intermediaries not enjoyed by legacy media entities like broadcasters, newspapers, or digital native journalistic enterprises that have to contend with more legal exposure. As a libertarian enactment, Section 230 has made the Internet a place of unbridled speech. This should not be confused with freedom from censorship or gatekeeping. As described above, the platforms make many design and content choices to amplify and circulate certain kinds of content and not others. Moreover, the free-for-all that Section 230 nominally creates has the effect of silencing some voices because of harassment, bullying, and other discourse harms.

Jurisdictions outside the US have adopted versions of Section 230, but none provides as much protection.[110] In Europe, platforms have borne more liability and responsibility for removing illegal content. Under the European E-Commerce Directive, for example, intermediaries are exempt from liability for content they host so long as they "play a neutral, merely technical and passive role towards the hosted content." Once they become aware that any hosted content is illegal, the intermediaries "need to remove it or disable access to it expeditiously."[111] Germany enacted the NetzDG law in 2018, enabling courts to fine social media companies with more than 2 million users up to €50 million if they do not delete posts contravening German hate speech law within 24 hours of receiving a complaint or seven days in more ambiguous cases. There are a number of EU and member state proposals to hold platforms responsible not only for illegal content but also for harmful

[110] https://wilmap.law.stanford.edu/map

[111] Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ('Directive on electronic commerce').

content and to impose a "duty of care" for managing content in the public's interest.[112]

In the US, public upset over platform amplification of harmful content, the failure to filter out harmful and illegal (child pornography, terrorist) content, political disagreements over content salience, and platform usurpation of legacy media advertising revenue has led to calls to reduce the protections of Section 230 and cognate intermediary liability immunities. There seems to be confusion about what exactly Section 230 does and, correspondingly, mistaken views about what limiting the immunity might achieve in terms of platform design. Section 230 has indeed been a windfall for platforms, allowing them to grow at the expense of legacy media. However, the provision is **not** directly responsible for most of the content that today reduces the salience of fact-based journalism and increases various kinds of noise. It is possible that reducing the scope of protection of Section 230 could incentivize platforms to boost exposure to credible news sources while depressing circulation of, or deplatforming entirely, disinformation that might trigger liability. There would be free speech costs (overmoderation) associated with such a move. For this reason, we propose below to preserve Section 230 protections, but to convert it to a safe harbor subsidy available on condition of compliance with various public interest requirements drawn from media and telecommunications policy traditions.

Section 230 Background

Section 230 was enacted as part of the Telecommunications Act of 1996 to govern "Internet service providers." The ISP to the ordinary publisher in 1996 was something like the scooter to automobiles today: a useful invention, but one hardly on the verge of dominance. Tarleton Gillespie writes: "At the time Section 230 was crafted, few social media platforms existed. US lawmakers were regulating a web largely populated by ISPs and web 'publishers'—amateurs posting personal pages, companies designing stand-alone websites, and online communities having discussions."[113] Although sometimes viewed as a sweeping libertarian intervention, Section 230 actually began life as a smut-busting provision: an amendment for the "Protection for Private Blocking and Screening of Offensive Material."[114] Its purpose was to allow and encourage Internet service providers to create safe spaces, free of pornography, for children.[115,116]

The goals at the time of adoption were (1) to give new "interactive computer services" breathing room to develop without lawsuits "to promote the continued development of the Internet,"[117] while (2) also encouraging them to filter out harmful content without fear of getting into trouble for under- or overfiltering. Thus Section 230 is both a shield to protect speech and innovation and sword to attack speech abuses on platforms.

The shield part is embodied in Section 230(c)(1): "No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider." This is not blanket immunity for the distribution of content, and indeed platforms are still liable for their *own* content, and for federal crimes and copyright violations related to third-party content. The immunity is really

[112] See, e.g., UK Secretary of State for Digital, Culture, Media & Sport, Online Harms White Paper (April 2019).

[113] Gillespie (2018).

[114] H.R. REP. No. 104-223, Amendment No. 2-3 (1995) (proposed to be codified at 47 USC. § 230).

[115] S. REP. No. 104-23, at 59.

[116] Pub. L. No. 104-104; see H. Conf. Rep. No. 104-458 (1996).

[117] 47 USC. § 230(b)(1).

limited to the speech-related harms that publishers ordinarily face such as defamation and intentional infliction of emotional distress. In other words, a platform like Facebook remains liable for distributing child pornography, which is federal criminal content. It also remains liable for Facebook-authored defamatory content. Facebook cannot, however, be held secondarily liable for defamatory content posted by its users.[118]

The sword part of Section 230 is contained in Section 230(c)(2)(A): "No provider or user of an interactive computer service shall be held liable on account of— any action voluntarily taken in good faith to restrict access to or availability of material that the provider or user considers being obscene, lewd, lascivious, filthy, excessively violent, harassing, or otherwise objectionable." This was designed to avoid the paradoxical situation in which an intermediary tries to moderate its platform to reduce harmful content, but then is subject to liability because it has exercised editorial control.

Section 230 is sometimes characterized as a "get out of jail free card" for platforms. According to Chesney and Citron, "Section 230 has evolved into a kind of super-immunity that, among other things, prevents the civil liability system from incentivizing the best-positioned entities to take action against the most harmful content."[119] To be sure, courts have extended immunity in situations that almost certainly go beyond what Congress originally intended. For example, platforms have been excused from transmitting otherwise illegal content even when they have solicited and have clear knowledge of that content. Moreover, platforms that do not function as publishers or distributors (e.g., Airbnb) have also invoked Section 230 to relieve them of liability that has nothing to do with free speech.

Proposals to Amend Section 230

There are currently proposals to revise Section 230, weakening the protections it affords to platforms. One possibility is to insist on more sword—more care to block or deemphasize harmful speech.[120] There are also proposals to weaken the shield and expose platform intermediaries to more liability.[121] Senator Mark Warner has floated a relatively narrow proposal to make platforms liable for state-law torts (defamation, false light, public disclosure of private facts), for failure to take down a deep fake or other manipulated audio/video content after the victim had already secured a judgment against the creator of the offending content.[122] There have been attempts in the past, including from US state Attorneys General, to carve out other exceptions for the enforcement of state law.[123] These have foundered on concerns about the incentives this would create for platforms to block too much speech, including speech of importance to journalists like the

[118] *Zeran v. Am. Online, Inc.*, 129 F.3d 327, 331 (4th Cir. 1997).

[119] Chesney & Citron (forthcoming 2019).

[120] One possibility would be to adopt in the US what has already been adopted in Europe, which is a notice-and-takedown regime that requires platforms to remove content upon notice.

[121] See, e.g., Keats Citron & Wittes (2017) (arguing for the conditioning of the benefits of Section 230(c)(1) on reasonable precautions: "No provider or user of an interactive computer service that takes reasonable steps to address unlawful uses of its services shall be treated as the publisher or speaker of any information provided by another information content provider in any action arising out of the publication of content provided by that information content provider.") The first weakening of Section 230 has already occurred with the Allow States and Victims to Fight Online Sex Trafficking Act (FOSTA), H.R. 1865, 115th Cong. (2018).

[122] https://www.techdirt.com/articles/20180731/10183940336/senator-mark-warner-lays-out-ideas-regulating-Internet-platforms.shtml

[123] https://www.eff.org/files/cda-ag-letter.pdf.

distribution of gun permits, which some states prohibit publishing.[124]

Proposals to weaken Section 230 certainly entail risks to free speech. If platforms are liable for the content they transmit, they will likely behave in risk-averse ways to remove content that creates or has the potential to create legal exposure.[125] This could silence speakers and have a disproportionate impact on marginal voices or, in some countries, political dissidents or minority groups. In the copyright context, where the Digital Millennium Copyright Act makes platforms potentially liable for copyright violations, they respond overzealously to take-down requests and implement aggressive filtering technologies that block more content than necessary. Early efforts to increase liability for harmful speech may be headed in the same direction. In Germany, the platforms' transparency reports show that they are blocking content in response to the NetzDG law, although there is not yet evidence of overblocking.[126]

In weighing the costs of any Section 230 contraction against the benefits, it is necessary to identify what those benefits are. Section 230 sceptics may exaggerate these benefits in connection with the speech that, while harmful, is not already circumscribed by law (unlike, say, defamation or incitement). This is because Section 230 is not directly related to some of the most problematic discourse harms such as disinformation, outrage, hate speech, radicalization, bullying, and intimidation. To take just one example, Facebook's erstwhile program that allowed advertisers to target users based on phrases like "how to burn Jews" and "Jew hater" did not benefit from Section 230 immunity, and so would not likely be affected by its absence. The same is true for most of the algorithmic amplification discussed above. The UK Online Harms White Paper has recognized that removal or substantial weakening of platform immunity (in that case, the EU E-Commerce Directive immunity, which is less generous than that which Section 230 provides) is a disproportionate response, unlikely to create the right incentives, and very likely to harm free speech.

The focus of this report is the platforms' impact on the production, distribution, and consumption of responsible journalism. Does Section 230 increase the amplification of "noise" (e.g., disinformation and outrage) that crowds out and starves good journalism? It is not clear. As a doctrinal matter, this noise is not illegal. Therefore, because Section 230 does not relieve platforms of otherwise applicable liability, it should not, in theory, increase platform tolerance for noise. On the other hand, the availability of Section 230 to excuse other kinds of speech traffic for which there would be a liability, such as

124 https://www.eff.org/deeplinks/2013/07/state-ags-threaten-gut-cda-230-speech-protections.

125 See, e.g., Kumar Katyal (2001) ("Because an ISP derives little utility from providing access to a risky subscriber, a legal regime that places liability on an ISP for the acts of its subscribers will quickly lead the ISP to purge risky ones from its system"); and *Zeran v. America Online*, 129 F.3d 327, 333 (4th Cir. 1997) ("Because service providers would be subject to liability only for the publication of information, and not for its removal, they would have a natural incentive simply to remove messages upon [accusation], whether the contents were defamatory or not").

126 https://publications.parliament.uk/pa/cm201719/cmselect/cmsctech/822/82208.htm#footnote-077 (Facebook in the first half of 2018 reported "'886 NetzDG reports identifying a total of 1,704 pieces of content', with '218 NetzDG reports' resulting in the deletion or blocking of content. This, Facebook noted, 'amounted to a total of 362 deleted or blocked pieces of content'…Twitter's transparency report, covering the same period, indicated that they received a total of 264,818 complaints of which 'action' was taken on 28,645. … Google, meanwhile, received reports relating to 214,827 'items' on YouTube … of which 56,297 resulted in action, either the item being removed or blocked.").

incitement or defamation, may create a more permissive and careless platform design than would otherwise exist. It is possible that if Section 230 benefits were less generous, platforms would implement safer design features that would also—as a byproduct—amplify truthful or otherwise "beneficial" information. The plan by the UK government to impose a risk-based "duty of care" on platforms seeks to improve the speech environment overall by increasing accountability for certain classes of speech.[127]

Our Proposal: Section 230 as a Quid Pro Quo Benefit

For reasons having to do with risk reduction and harm prevention, legislators may well amend Section 230 to raise the standard of care that platforms take and increase exposure to tort and criminal liability. Since our focus is on improving the conditions for the production, distribution and consumption of responsible journalism, we have a different kind of proposal. We look at Section 230 as a speech subsidy that ought to be conditioned on public interest requirements, at least for the largest intermediaries who benefit most and need it least. It is a speech subsidy not altogether different from the provision of spectrum licenses to broadcasters or rights of way to cable providers or orbital slots to satellite operators.[128]

The public and news producers pay for this subsidy. The public foregoes legal recourse against platforms and otherwise sustains the costs of harmful speech. News producers bear the risk of actionable speech, while at the same time losing advertising revenue to the platforms freed of that risk. Media entities have to spend significant resources to avoid legal exposure, including by instituting fact-checking and editing procedures and by defending against lawsuits. These lawsuits can be fatal, as in the case of Gawker Media.[129] More commonly, they face the threat of "death by ten thousand duck-bites" of lawsuits even if those suits are ultimately meritless.[130] The monetary value of Section 230 to platforms is substantial, if unquantifiable.[131]

Section 230 subsidies for the largest intermediaries should be conditioned on the fulfilment of public interest obligations.[132] We address transparency and data sharing requirements in this report that should apply generally to the companies within scope. However, there may be additional requirements

[127] The new regime's covered "online harms" include terrorist content, child sexual exploitation and abuse, incitement of violence, harassment and cyberstalking, hate crime, encouraging or assisting suicide, the sale of illegal goods or services, revenge pornography, cyberbullying, and children accessing inappropriate material.

[128] Cleland (2018) estimates that the net benefit to Google, Facebook and Amazon from Section 230 was \$510 billion in "riskless disruptive innovation per immunity from civil liability." To this, he adds \$755 billion in "socialized costs of platforms' uneconomic riskless disruptions," although this category reaches far beyond direct effects of Section 230 (e.g., addiction, polarization, election manipulation, devaluation of intellectual property, privacy harms). Of note, he also estimates the benefit of "exemption from all FCC economic and public interest regulation" to be \$31 billion (e.g., public safety, privacy, children and consumer protection, content requirements).

[129] *Bollea v. Gawker Media*, 913 F.Supp.2d 1325 (2012).

[130] *Fair Hous. Council of San Fernando Valley v. Roommates.Com*, LLC, 521 F.3d 1157, 1174 (9th Cir. 2008).

[131] The difference between the early dismissal of a lawsuit under Section 230 versus later dismissal in the absence of Section 230 protection has been estimated to be worth \$485, 000 each. https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/5c6c5649e2c483b67d518293/1550603849958/Section+230+cost+study.pdf

[132] The size of the intermediary covered should be internationally harmonized to correspond with definitions in the new UK duty of care and European Copyright Directive.

that a regulator would not want to, or could not, impose across the board. For example, the UK has proposed to require platform companies to ensure that their algorithms do not skew towards extreme and unreliable material to boost user engagement. We would not recommend such a regulation, but it might be appropriate to condition Section 230 immunity on such a commitment for the largest intermediaries.

We believe that Section 230 immunity for the largest intermediaries should be premised on requirements that are well-developed in media and telecoms law:

- Transparency obligations: Whichever of these requirements did not become part of a mandatory regulatory regime could be made a condition of Section 230 immunity. Platforms should give a regulator and/or the public data on what content is being promoted to whom, data on the process and policies of content moderation, and data on advertising practices. These obligations would go some way towards replicating what already exists in the off-platform media environment by virtue of custom and law. Newspaper mastheads, voluntary codes of standards and practices, use of ombudsmen, standardized circulation metrics, and publicly traceable versioning all provide some level of transparency that platforms lack. For broadcasters, there are reporting and public file requirements especially with respect to political advertising and children's programming.

- Subsidy obligations: Platforms should be required to pay a certain percentage of gross revenue to support the voucher system discussed in this chapter. In the US, telecoms providers have been required to pay into a Universal Service fund in order to advance public interest goals of connectivity. Public media has not been funded by commercial broadcasters. However, there was once a serious proposal at the advent of digital broadcast television for commercial broadcasters to "pay or play"—that is, to allow them to serve the public interest by subsidizing others to create programming in lieu of doing it themselves.[133] The nexus between the Section 230 benefit and the journalism subsidy is essentially this: Section 230 unavoidably allows many discourse harms and "noise" in the information environment. A subsidy for more quality "signal" goes some distance towards compensating for these harms. It is important to stress that any tax that would be levied on the platforms has to go to the general budget and not be tied in any way to the voucher scheme proposed here—to prevent a situation whereby news outlets have an incentive to lobby directly or indirectly through their editorial agenda to protect the power and revenues of the platforms.

Conclusion

Media is central to the democratic process because it provides the information citizens need to make voting decisions and keep government and powerful players in the public and private sector accountable. This report summarizes the evidence on the effect that the growth of digital platforms is having on news provision and reviews possible policy interventions.

The available evidence highlights a number of points:

- The role of digital media in the democratic process cannot be understood in isolation, as voters, citizens and readers obtain

[133] Advisory Committee on the Public Interest Obligations of Digital Television Broadcasters (1996). See also Sunstein (1999, p. 40) ("What if a broadcaster was willing to give $10 million to PBS in return for every minute, or every thirty seconds, of relief from a public interest responsibility?").

their political information from both old and new platforms.

- There is ample evidence from a variety of historical and geographical contexts that news quality affects voting outcomes and accountability of decisions makers in both the private and public sphere. In turn, news quality—both coverage and impartiality—worsens when the media industry is concentrated and not independent.

- News is a public good. In the 20th century this good was mostly paid for by advertisers. The most direct effect of the rise of the digital economy has been a crisis of that revenue model. Advertising dollars have inexorably shifted from news producers—mostly newspapers—to digital platforms that do not produce news. This effect is particularly strong for local news. Some subscription-based news providers are thriving, but most citizens are not willing to pay for them.

- There is also more nuanced evidence for a reduction in citizens' information and engagement and the echo chamber effect. Evidence on the effect of "fake news" is instead very limited. When we analyze policy interventions, we focus on countries where freedom of expression enjoys strong constitutional protection, and we do not consider generalized content regulation policies. We group possible policy interventions into four categories:

- Revenue model. We consider the pros and cons of a number of possible revenue sources: advertising, subscription, philanthropy, and public funding. The most cost-effective and robust solution is a publicly funded voucher system. The funds are allocated directly by the citizens—independently of any government intervention. A cap is placed on the amount that a particular news organization can receive to promote competition.

- Media plurality. All mergers and acquisitions involving news companies should be subject to a news plurality review in addition to the standard antitrust review. Standard competition policy protects direct consumer welfare, and therefore does not take into account the indirect effect that excessive media concentration can cause on citizen welfare. We propose an approach to quantifying news plurality that is neutral to the identity of the owner of the merging entities and to the platform on which news content is delivered. The proposed approach, based on attention shares, has been used in a recent merger decision in the UK.

- Algorithm regulation. Developing a new regulatory system that will ensure transparency regarding information flows from news sources, practices and algorithms to the public. This will be done by a new regulatory framework and oversight body to set standards for the disclosure of information and news sources, to develop a means for source-based reputational mechanisms and to bring light to biases and choices in editorial decisions and algorithms for the presentation of the news. These regulators will produce periodical reports on news consumption and the algorithms' design influence on the distribution of news and the behavior of users. The digital regulator will set terms and conditions that will allow publishers and original content creators to negotiate with the digital platforms.

- Liability exemption. Digital platforms enjoy a hidden subsidy worth billions of dollars by being exempted from any liability to most of the speech on their platforms (Section 230). We do not propose to repeal Section 230 but rather propose that platforms that would like to enjoy this protection would have to agree to take measures to prioritize content by criteria other than maximization of revenues.

The existence of vibrant independent journalism is an essential part of liberal democracy. Powerful actors in government, politics and the private sector have always tried to capture, weaken or manipulate the press. As the business model of news media outlets has disintegrated and the production and distribution of news has become more concentrated, there is a growing risk that in many democracies and localities politicians and powerful private actors will not be held accountable for their actions.

Technology will reduce the costs of collecting and analyzing information, but journalists will continue to play the central role in informing the public and holding the powerful to account.

The aim of this report is to offer policy recommendations to preserve independent journalism—not to find ways to aid or subsidize existing news outlets. While other reports and initiatives try to find ways to preserve the news media's revenues from advertising, we believe that this approach is mistaken. Any policy to preserve the free press should try to reduce or eliminate the news media's reliance on politicians, governments, advertisers, large business groups or billionaires.

Our recommendations represent a significant shift from the status quo. We believe that increased public funding of news media through a competitive process that caps the amount which can be allocated to a single news outlet will create a more competitive and independent news ecosystem.

The success of a handful of large national publications or small niche publications in reaching adequate profitability through the subscription model is encouraging. Nonetheless, for the most part citizens are not willing to pay for this public good—meaning we need to rethink the economic model of the news media.

Recent events across the Western world have demonstrated the fragility of the liberal democratic order, and we believe that waiting longer to see if market forces alone can maintain the free press in the 21st century may be a risky choice.

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