Digitalization of the News Media Industry

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Abstract

The news industry has to digitalize to compete against the growing role of social media platforms as the main source of news for users. The disaggregation of content from physical newspapers to digital forums has enabled misinformation to thrive and hindered the monetization prospects of legacy media.

Digital users have moved from being passive recipients to active agents in the creation and distribution of ideas. When the role of the user digitalized, the needs of users also digitalized. Users used to read physical newspapers to seek knowledge and stay updated on their local communities. Now, Google has addressed the need to search for information about any given topic, while Facebook has enabled digital consumers to connect with anyone and everyone. Narratives are no longer merely fed to society; narratives have instead begun to be shaped by users, albeit with a plague of misinformation.

The news industry has also struggled with profitability since moving from analog to digital. Publishers need to rethink their monetization models by digitalizing their value proposition, be it to readers or advertisers. News media has to adapt to the digital age by applying customer-centricity across the content consumption experience to the monetization model. Ultimately, the survival of the news media industry also represents the persistence of news as a fundamental component in society.

Keywords: news industry, legacy media, filter bubbles, echo chambers, fake news, digitalization, monetization models

Introduction

News media plays a central role in shaping ideas and fueling debates by acting as the primary source of breaking information to the public. The role of news in society is to provide coverage on anything and everything that will serve the purpose of entertaining, informing, or education. The role of news to "entertain, inform, and educate" was adopted to BBC's ethos as defined by Lord Reith (Holtz-Bacha & Norris, 2001). Before the widespread adoption of the Internet, publishers distributed their news content in the form of printed newspapers. Today, the media is able to provide real-time reporting on monumental world events globally across the Internet.

When news publishers published their analog content online to reach a wider audience the news media industry experienced digitization. However, digitization is not enough to adapt to disruption in the industry. In order to compete with phenomena like the rise of social media, the news industry needs to utilize digital technologies to rethink the way content is published and interacted with – "digitalization" of the industry. Media digitalization is imperative in addressing the two major issues plaguing the news industry today: misinformation and the struggle to monetize.

The inception of the Internet significantly lowered the barrier to entry to distribute content. While large newspapers that dominated in the print era still have professional authority and distribution abilities in the digital world, smaller digital-first publishers such as blogs have been able to reach an audience like never before. Social media networks used their popularity and extended the ability to distribute content through users; users are now able to share articles on their Facebook timeline and provide their commentary on issues on Twitter. Users are therefore now an integral part of the distribution process, holding the power to dictate what goes viral and what does not. Digitalization has shifted the role of users from being a passive receiver of information to an active agent in the creation of content and its chain of distribution, but publishers have by large failed to recognize and adapt to this new dynamic.

As part of digitalization, the news industry needs to be able to compete against social media misinformation in order to stay profitable and pursue high-quality journalism. The democratization of information distribution has enabled misinformation to be distributed, and, in some cases, thrive. Social media platforms were created for social networking, not necessarily distributing truthful information. Platforms deflect the responsibility to remove incorrect content because platforms have to respect their users' freedom of speech. However, platform regulation is controversial and often only addressed when harm has already been inflicted. For example, Facebook claims to only take down content if potential harm is detected, but has been accused of even neglecting this responsibility by failing to remove hate speech. While platforms claim they are not media companies, platforms like Facebook and Twitter cannot ignore their responsibilities in ensuring users abide by their own terms of use or ignore their role in the

spread of misinformation. Platforms have to acknowledge their responsibility in the spread of misinformation and take initiatives to encourage the truth.

The future of the media industry relies on publishers being able to monetize while pursuing high-quality journalism. Digitization has overcrowded the volume of information consumers have access to – the quality of a piece of journalism only matters as much as its ability to capture the attention of consumers. There has been an industry-wide decline in revenue, particularly among publishers that rely on digital advertising. Similar to how publishers digitized by taking their old product (newspapers) and putting it online, publishers digitized their monetization models by taking their printed advertising and put it online. In recent years, there have been different initiatives by news publishers to seek new sources of revenue, such as implementing a paywall or moving toward native advertisements. Ultimately, publishers need to pursue digitalization by introducing more digital technologies to their monetization models.

In the pursuit of digitalization, news organizations have to prioritize the needs of users by being customer-centric. Ultimately, the need for news to be credible and informative will triumph over other customer needs. However, the news industry has to also recognize the evolving needs of the digital reader and create digitalized content consumption experiences.

The Tension between the Role of News and Monetization

The flow of information and ideas are fundamental in a democratic society (Kovach & Rosenstiel, 2007). The free press acts as the watchdog against societal malpractices and injustices. More broadly, the news acts to inform society on political, economical, and societal issues that are of interest on a regional to global level. The news media is even considered the "fourth pillar of democracy" alongside the judicial, executive, and legislative branches (Roy, 2015). In their book "The Elements of Journalism," Bill Kovach and Tom Rosenstiel (2007) identify that the first obligation of journalism is to the truth. Previously, news media organizations dictated the agenda of public discourse – these organizations had the authority and influence to decide which topics reached a large audience and which did not, because they had the monopoly over communication to mass society. Curation was the high-level benefit that print newspapers offered consumers. Pre-digitization, there were limited sources of information and limited means of obtaining up-to-date information about the local and global environment. High-quality journalism and curation have contributed to audience loyalties to large publishers that pride themselves on being able to monetize their original content. Today, however, publishers are faced with the challenge of having to dedicate resources to stay relevant in the eyes of consumers while still playing the role of society's watchdog.

The physical newspaper is not the product itself. The product was not even the content. The product of news publishers was the curation of information, backed up by the brand of a reputable publisher (Picard, 2011). Pre-digitization, consumers would rely on one or a few newspapers for their daily dose of worldly information. Consumers did not think about the type

of content they would consume; they would read the cookie cutter product that the newspaper distributed, skipping the sections or content they were not interested in. Consumers were purchasing physical copies of newspapers, and since there were limited choices of media to consume, advertising on newspapers was effective and contributed to revenue for the news outlets.

When the news industry digitized, the value of curation significantly diminished, because consumers did not have to be restricted to one or a few publishers. The value of bundling information diminishes online, because online media inherently disaggregates content, pushing users to personalized content instead. Consumers went from consuming news from one or a few publishers to consuming different content from different publishers, thereby diminishing value proposition that used to support newspapers financially.

Picard (2011) argues that publishers find it challenging to maintain exclusivity of information on their websites due to cross-platform dissemination, linking, and forwarding capabilities. Over time, publishers have been working on devising tactics to eliminate the leaks as an attempt to commoditize their content. In doing so, the publication essentially recognized their main value proposition as the content, not the curation; however, the news industry is not struggling because of content leaks but because the way users consume their daily information is evolving faster than publishers have been able to react.

Since moving online, news outlets have struggled to monetize. In the digitized era, an abundance of news publishers churn out content rapidly and cost-efficiently. The cost of distributing content has dropped significantly by moving content distribution from physical to digital. According to Picard (2011), the reduction of production and distribution costs has reduced overall operational costs by 80-90%. Not only is it cheaper to produce content now, but there are also more opportunities to monetize the same content (Mittelman, 2016). Picard (2011) recognizes the need for legacy media companies to undergo digitalization because digitization has brought about increased competition, new types of content, and diversified means of accessing digital media. However, he also posited that the struggle to monetize digital news is not because of the monetization model, but the product itself: "[...] too many of them are trying to sell 19th and 20th-century products in the 21st century" (Picard, 2011).

Digitization has diminished the influence media companies have over top headlines because digitization has lowered the barrier to entry for content creation. New content competitors such as blogs and social media platforms, have extended the ability to publish to everyday users. This has created a challenge to traditional news publishers, because professional journalism now has to compete with user-generated content, fake news, and free content for the visibility and attention of the public. Readers are no longer passive but have developed into content redistributors, creators, and commentators. Digitization has turned the one-way distribution of news into a robust dialogue of ideas. However, the digitization of news will

actually worsen from interactivity with users, because users are not trained to interact with one another and the news fruitfully.

Thus, digitization will not be sufficient for the news media industry to continue playing its role as society's watchdog and informant if news media companies are unable to monetize or convince users to interact with their content. The news industry needs to prioritize its obligation to society as an informant on relevant news in politics, economics, and the environment. News media companies should be customer-centric in thinking about digitalizing the news consumption experience. Digitalizing the news consumption experience could entail experimenting with the medium, or the content delivery experience. There is no one size fits all solution; the recommendation to digitalize is intentionally generic in its prescription to allow news media organizations to discover the solution that works best for their readers, newsroom, operations, and publication.

Echo Chambers, Filter Bubbles, and Fake News

News media used to control the narratives that reach a mass audience but have failed to digitalize since the Internet boomed. News media lost its influence as a platform for ideas, and news aggregators took over to fill the market need for an interactive forum of ideas that news media failed to provide to digital consumers. Consumers stopped being reliant on news media for their content consumption and turned to social media and news aggregators; news media lost user dependence and the ability to monetize off users. Disaggregation of news media does not only have an impact on a publisher's ability to monetize but affects the core purpose of news media in democratic societies. The news media's dedication to reporting truth and injustices to society becomes complicated when there is no consensus on what the truth is, and what constitutes injustice. Today, the U.S. is becoming a less cohesive nation, as seen by a steady increase in party polarization since 1940 (Brooks, 2016). The U.S. is also less economically cohesive, as the share of income going to the top one percent of earners has steadily risen since 1975. Socially, the U.S. is and has always been a melting pot of cultures due to various waves of immigration, amalgamating in a diverse but relatively separated society (Brooks, 2016). The divided state of society manifests itself in varying values and opinions about issues, which influence users' content consumption. People tend to favor information that reinforces their existing views and avoid contradictory information – a phenomenon known as selective exposure theory, a form of confirmation bias (Hart et al., 2009).

The marketplace of ideas theory states that democratizing access to a public forum should be positive because it increases the diversity of ideas shared – essentially the speech equivalent of capitalism. Similar to how the best products will beat out poor products in a free exchange, the best ideas will triumph over the worst under the marketplace of ideas (Delistraty, 2018). Delistrary (2018) quoted Justice Louis Brandeis, who famously wrote in the 1927 Supreme Court case Whitney v. California, "the remedy to be applied to [falsehood and fallacies] is more

speech, not enforced silence." However, while the Internet has removed physical barriers to the spread of ideas, the idea of competition behind ideas no longer applies to the exchange of information in the internet age. Search engine and news feed algorithms shape the digital marketplace of ideas and ultimately dictate what consumers realistically consume, creating what is known as filter bubbles.

While algorithms are partly to blame for polarized content consumption, consumers also play a role by seeking out ideas that confirm their existing beliefs, fostering echo chambers (Delistraty, 2018). On social media news feeds, echo chambers manifest when users tend to like pages and follow users who share similar beliefs as them, resulting in echoed beliefs due to the constant repetition of narratives. On top of the psychological tendencies for humans to reinforce our pre-existing views, social media platforms have enabled users to artificially amplify the effects of their confirmation biases because the Internet has enabled geographically dispersed users to consolidate based on ideas (Grimes, 2017).

Filter bubbles, on the other hand, emerge when algorithms of social media platforms curate content based on a viewer's previous behavior. The combination of echo chambers and filter bubbles amplify existing beliefs and isolate users from attitude-challenging content (Sharwood, 2015). Filter bubbles support echo chambers in this digital age by keeping the content that users see on their customized news feeds inoffensive to any given user. Social media platforms strive to be addictive, with main key performance indicators being daily active users (DAU) or monthly active users (MAU). Social media platforms are designed to hook users to spend more time on a given platform, thus providing platforms with more opportunities to monetize off the daily usage of users (Kenton, 2018). However, users need to be exposed to attitude-challenging content to prevent identity politics from dividing society like they are today. Based on the published research of two Facebook employees and an academic researcher from the University of Michigan, only 45% of liberals and 40% of conservatives share content that contrasts an individual's worldview (Bashky, Messing, & Adamie, 2015). Platforms have been complicit in putting business needs before societal needs, but platforms are recognizing the need for balance. Mark Zuckerberg, Facebook founder and CEO, pledged that in 2018, Facebook would focus on making sure it is good for people's well-being and society, on top of being fun (Utermohlen, 2018).

Echo chambers and filter bubbles are worrying, because society is increasingly polarized, and this issue is exacerbated by fake news. According to the Reuters Institute for the Study of Journalism, fake news has become an umbrella term for various phenomena "[...] including annoying pop-up advertisements, politicians making misleading claims, and newspapers with a political slant" (Harford, 2019). Fake news is disinformation or the spread of rumors through news and social media (Himma-Kadakas, 2017). The source of the false information is supposedly attributed to reporters paying sources for stories, also known as checkbook journalism (Himma-Kadakas, 2017). Checkbook journalism incentivizes sensationalism and has

minimal institutions to verify the validity of information, because the practice is deemed unethical in the media industry. The news media industry must be product-centric with the role of news to inform and educate society, not as a means to make purely monetary gains. Fake news is also defined as created with defamation intents toward an entity or to make gains financially or politically. Harford (2019) understands the original definition of fake news as content that impersonated genuine journalism to attract advertising dollars, and he recalled the most famous example being Donald Trump receiving the Pope's endorsement during his presidential campaign in 2016. The story was able to monetize through advertising impressions and clicks due to the immense traffic the fake story received. Fake news threatens genuine journalism because fake news is sensationalized and thereby receives considerable monetizable traffic. From the perspective of a journalist who cares deeply about providing quality reporting, fake news is cheating the system that incentivizes journalists to produce stories people want to read. Ultimately, a system that incentivizes journalist to report on meaningful issues will be customer-centric by serving society's need for information.

Fake news thrives in the era of social media because news feed algorithms allow virality to perpetuate and reach an exponential readership, thus capitalizing on advertising revenue. Sensationalized stories make perfect clickbait stories and headlines – Merriam Webster (2018) defines clickbait as something designed to lure readers to click on a link with content of questionable value or interest. Legitimate news outlets have to compete for visibility with sensationalized fake news that allures the attention of the public. Fake news is garnering relevance in the post-truth politics era where political issues are debated on the axis of emotion rather than disputing facts. Fake news and social media newsfeed algorithms create a reinforcing feedback loop with sensationalized content, which has a second-order effect on the displacement of legacy media's monetization model. The ability to distinguish legitimate news stories from fake news further contributes to the polarization of society. Fake news is complicit in exacerbating the divide between people by reducing trust in legitimate news outlets.

There are numerous reports that fake news has resulted in more favorable outcomes for Republicans and Conservatives in the United States, but fake news is a global problem (Silverman, 2016; Allcott & Gentzkow, 2017; Blake 2018). Researchers found evidence of Russian digital propaganda interference plaguing the United Kingdom's Brexit vote (Booth, Weaver, Hern, & Walker, 2017), the Catalonian independence movement in Spain (Palmer, 2017), German elections (Shuster, 2017), and French elections (Farand, 2017).

The Washington Post (2018) reported an unpublished study from Ohio State University which concluded that fake news likely impacted the outcome of the 2016 presidential elections. The study found that ~4% of 2012 Barack Obama voters were influenced to vote for Obama due to fake news stories about Hillary Clinton in the 2016 presidential elections – among those influenced, 20% of voters believed unverified stories about Clinton supposedly approving weapon sales to Islamic jihadist (Blake, 2018). This study conducted a regression analysis that

encompassed numerous factors that would influence an Obama supporter to not vote Clinton in 2016. According to Blake (2018), belief in fake news, as a factor, accounted for 11% of the variance in results, allowing researchers to conclude that fake news had a very direct effect on the outcome of the 2016 election.

Facebook CEO Mark Zuckerberg claims that less than 1% of content on its users' news feeds is "fake news" and misleading content, although there seems to be an apparent spike in misleading news around large political events, such as an election or a referendum (Newman, 2018). Three months before the U.S. presidential elections, a study by Silverman (2016) showed that the top 20 fake election-related news stories received 8,711,000 Facebook engagements – reactions, comments, and shares – more than the top 20 real news stories, which only received 7,367,000 engagements.

The Internet has enabled information to be transmitted at a rapid pace. Echo chambers, filter bubbles, fake news, and misinformation plague the digital information age and are indicators that the news media industry must undergo digitalization. Both platforms and publishers have a role to play in the digitalization of the news media industry to build mechanisms and norms in establishing healthy information consumption and productive discourse.

Platform Dominance

The rise in the popularity of platforms is a symptom of the news media industry failing to undergo digitalization. Previously, newspapers were the curators of content for consumers. When news outlets began publishing online, news outlets failed to recognize and fulfill the desire of users to see content from everywhere and interact with the content. As a result, third-party content aggregators filled the needs of the consumer and gained popularity quickly. Digital content aggregators are websites that amass news articles, videos, pictures, and other forms of media from various sources, primarily original content publishers. Initially, aggregators were serving a small audience. In fact, publishers made the first move and began giving news aggregators their content for free in attempts to reach a wider audience – and they did. Publishers got massive viewership through aggregators but sparse returns on investment (Sharma, 2017). Publishers had only one option to generate revenue when distributing through content aggregators: a revenue-sharing model. Content aggregators relied on subscription models and gave a cut to publishers who provided the content. However, just like how content aggregators threatened the revenue streams of content publishers, content aggregators are getting threatened by social media.

As social media platforms grew in popularity, their influences over consumers' attention followed. Soon enough, social media platforms acted as news aggregators too. With social media primarily operating under an advertising revenue model, which meant consumers can consume content for free, subscriptions to news aggregators lost some market share because social media

platforms also offer interactivity on top of breaking news (Stones, 2016). Lanier (2017) attributed the rise of social media platforms to statistical behavior-modification of the population by manipulating people's attention and their perception of choice. Lanier (2017) even compared the manipulation of consumer's attention to the Skinner box. People in the Skinner box have the illusion of control but are actually controlled by the box itself or the people behind the box – Facebook users are under the impression that they have control of their social media consumption habits when, in reality, Facebook as a platform and company have true control (Lanier, 2017).

Reuters Institute research presented that in almost all countries, more people rely on social media than printed newspapers for news. A whopping 68% of American adults reported at least occasionally getting news from social media, with 20% often getting their news from social media, as shown in *Figure 1* (Matsa & Shearer, 2018). The overwhelming and predictably increasing dominance of social media platforms threatens the sanctity of distributing credible information. However, the Media Insight Project (2016) reported that only 12% of Facebook news consumers reported having a lot of trust in the news they see on the platform. Pew Research Center (2018) found that 57% of Americans expect the news they see on social media to be largely inaccurate, as shown in *Figure 2*. Consumer confidence in the accuracy of the media also varies across political allegiances. *Figure 2* shows 72% of Republicans expect news on social media to be largely inaccurate, while only 46% of Democrats share the skepticism (Matsa & Shearer, 2018).
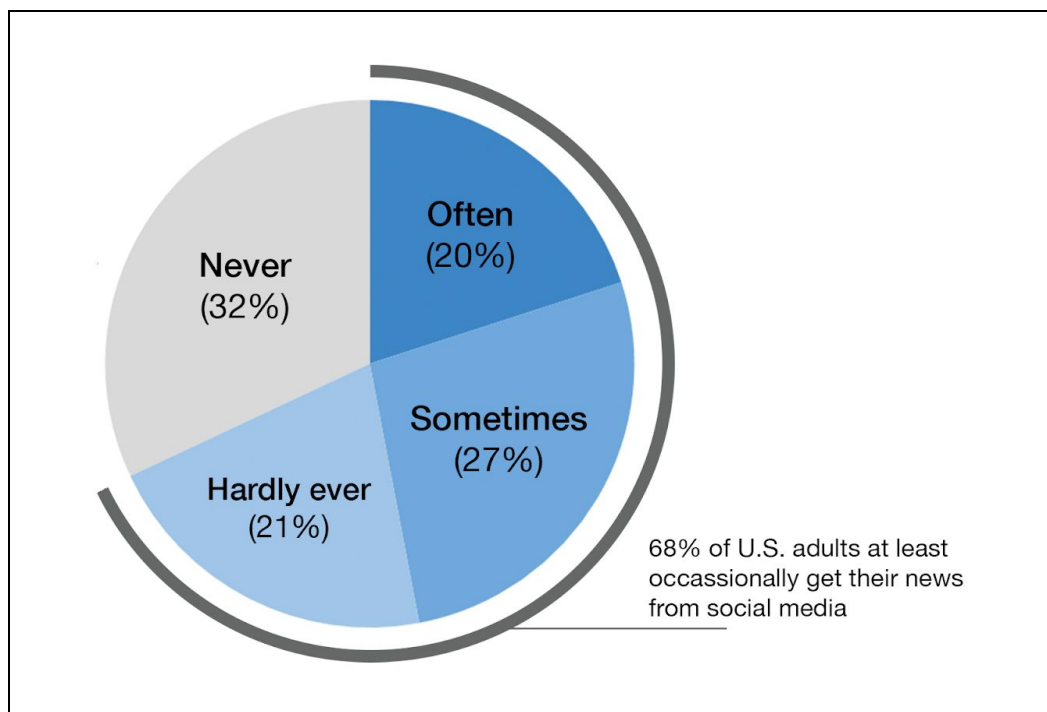
Figure 1. Pie chart visualizing the percentages of Americans reported getting some of their news from social media. Adapted from "News Use Across Social Media Platforms 2018" by K. E. Matsa and E. Shearer, 2018, Pew Research Center: Media and Journalism.
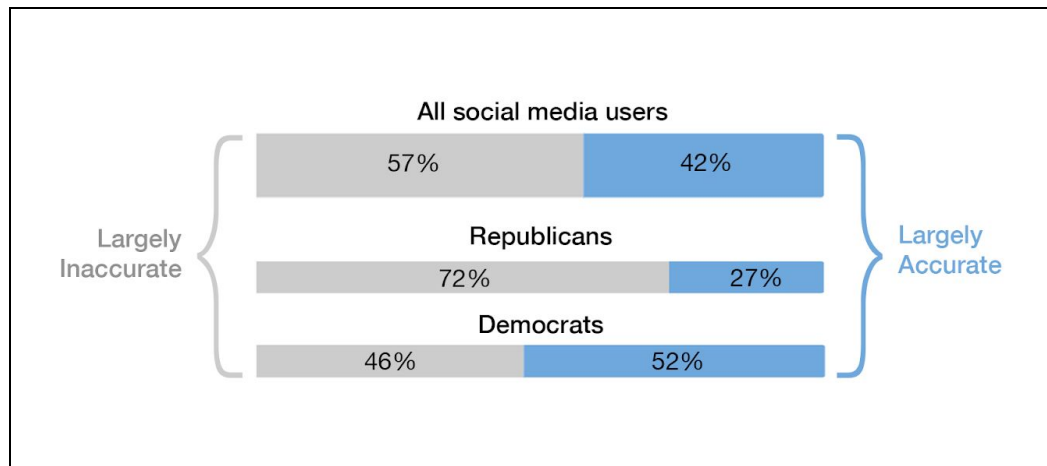
Figure 2. Percentage of social media news consumers who say they expect the news they see on social media to be largely inaccurate versus largely accurate. Adapted from "News Use Across Social Media Platforms 2018" by K. E. Matsa and E. Shearer, 2018, Pew Research Center: Media and Journalism.

Ultimately, the massive flock of consumers toward news aggregators and social media platforms significantly alters the relationships between publishers and their audiences. Aggregators threaten the ability of original content creators to monetize. Now, platforms stand between the content creator and the reader. Publishers allowing their content on aggregators may result in the cannibalization of traffic away from their own websites. Moreover, publishers have limited autonomy over the delivery and presentation of their content and experience waning brand visibility (Sharma, 2017). Aggregators and social media platforms have only one objective: to distribute as much content as possible. Irrespective of personalization, brand authority, or fake news, aggregators may negatively impact the brand image of publishers. Aggregators undermine the value of consumers subscribing directly to the publishers because aggregators have stripped publishers of the main value proposition of print newspapers: curation.

In the present dynamics between platforms and content creators, platforms have the upper hand since platforms interface with users directly. Although platforms need content creators to post on their platforms, the dynamics of the relationship are favored towards the platform in dictating the rules of content consumption. Essentially, content creators are at the mercy of the oligarchy of centralized content platforms. Facebook has been able to heavily influence the digital content strategies of its advertisers by claiming to have 60-80% higher average time spent watching videos, according to the Wall Street Journal (2016). The social media giant was advertising this exaggerated false metric for over two years in order to get more video content on

their platform. Facebook tried to get more video content on their platform to compete with YouTube as a dominant video platform (Wagner, 2018). However, the falsely advertised metric led to enormous shifts in publishers' strategies. For example, Vice laid off 2% of its workforce to expand its video production capabilities in 2017. Facebook's misinformation cost people jobs – not because the industry was undergoing disruption, but because Facebook wanted more video content on their platform. MTV News, on the other hand, announced in 2017 that they were shifting more resources into producing short-form video content because it was "more in line with young people's media consumption habits." Facebook was able to influence the way publishers viewed their audiences, perpetuating the idea that younger audiences have a shorter attention span and publishers need to adapt by producing content to fit the "consumer needs." In fact, Reuters Institute for the Study of Journalism found in their research that text was a superior medium compared to video for news due to various video barriers including consumption efficiency, pre-roll ads, slow internet access, and lack of differentiation from text content (Owen, 2016). Newman (2018) predicts that social media platforms will pay for content as platforms become desperate for growth. In the past, Facebook has paid 140 publishers to kick off its live video feature (Newman, 2018). In order to maintain consumer attention and loyalty, these platforms have to ensure high-quality content continuously populates social media feeds. However, platforms are less reliant on any one content creator than vice versa. Given these examples, it is clear that Facebook and other content aggregators have the upper hand in a supposedly "symbiotic" relationship between platform and publisher.

The dominance of platforms over publishers stems from the ability of platforms to fill the user's need to experience and interact with curated information using digital technology. The desire to continuously explore and search for new information has been enhanced by the invention of the Internet. While news media failed to digitalize, society's desire to seek new information has, with the introduction of Google.

Case study: Google.

Google is a search engine that aggregates the billions of websites available on the World Wide Web to return a search result that best answers a given search query by a user. Google was not the first search engine to do this but is undeniably the most popular modern search engine. Google reached the ultimate brand status of replacing the common noun and becoming a household item – when looking for answers, people "Google it" instead of "search it." The ubiquity of the Google brand is the embodiment of how successful Google was in filling the desire of Internet users to search for anything and everything. Google managed to take over the entire news industry as the source of new information for humans – in the beginning, the takeover may not have been apparent, but in 2019 it is clear that Google managed to fill a need for Internet users that news outlets could not.

In 1995, Larry Page and Sergey Brin, two Stanford Ph.D. students, initially developed Google to rank the credibility of academic papers by how often a given paper was cited, and if a given paper is cited by other papers with many citations. Page and Brin soon realized they had accidentally discovered a better way to search the Internet than most search engines online at the time (Harford, 2017). The founders built Google by ranking the credibility of each web page on the Internet based on the same philosophy of ranking academic papers and called it backlinking. So in 1998, Page and Brin launched the company Google Incorporated (Google, n.d.). Today, Google handles around 90% of worldwide searches (Harford, 2017).

Google monetized through advertising using the pay-per-placement model where advertisers could bid on particular keywords in search engine results. Users were seeing ads that were relevant to their search query and, for the first time, advertisers could target users based on what they searched. Google eventually followed other industry players in moving to a pay-per-click advertising model whereby advertisers only paid when a user clicked on an ad. Google wanted a way to charge for ads without compromising the quality and relevance of search results. Thus, Google Adwords introduced a Quality Score model where the click-through rate of an advertisement was considered when determining the placement on the search result page. The Quality Score model prioritized high click-through rates over bid value to show users the most relevant paid ad to their search, not the most expensive one (Cook, 2016). Google exhibited its dedication to customer-centricity when it balanced the needs of both its end-user customers and its advertiser customers by introducing the Quality Score Model.

In 2005, Google News was founded. Google news is a news aggregator but has also functioned as a source of traffic to news sites. Google News aggregates content that it "algorithmically harvests" from over 50,000 news sources (Garber, 2012). Each month, Google contributes to 4 billion clicks to news outlets – Google News contributes to 1 billion and Google Search contributes 3 billion. Garber (2012) reported a Google representative framing these numbers as "[...] about 100,000 business opportunities we provide publishers every minute." Google News prides itself in helping publishers monetize by driving traffic. In addition to being able to opt-out of Google News' crawling, Google News only displays the news headlines and links users to the original news publishers' sites (Garber, 2012). Google has been trying to nurture its relationships with news publishers though investing in experimental projects of processing and presenting journalism. Google put out a chunk of code that publishers can use to be possibly listed as "Featured" in the Google News app – this initiative was a response to publishers getting frustrated that sometimes meaningful journalism gets lost in the weeds of aggregators. Additionally, to respond to the emerging cultural shift toward the personal branding of journalists, Google News added social media profiles to journalists' bylines (Garber, 2011). Initially branded as powered by algorithms, Google News started recognizing the news industry as a colleague rather than a competitor (Garber, 2012).

Despite the fact that Google's news aggregation system was built to enhance credibility, at scale, Google also faces the problem of misinformation. Unlike scholarly articles, websites do not experience verification. Google's backlinking search algorithm does not guarantee the credibility of the content – Google's algorithm displays how well linked a given website is to other websites based on keywords in the search query. In the past, Google has implemented various features to enhance its search engine results with verified information. For example, Google introduced The Knowledge Graph, which provides a succinct answer that compiles information from various sources in the form of an infobox. Google has been criticized for this feature in the past because there have been multiple instances of information populating The Knowledge Graph with no source attribution or citation. The omission of sources is problematic because according to Dario Taraborelli, the head of research at the Wikimedia Foundation, it undermines users' ability to verify information, and then develop well-informed opinions – which are important information literacy norms to develop as a society (Dewey, 2016). Google's poor execution of The Knowledge Graph defeats the purpose of the initiative to help users discover accurate information easily. Google needed to be product-centric to ensure the credibility of information presented in The Knowledge Graph, to ultimately provide users with quick and reliable information.

Google News added a label "Fact check" to categorize verified content in 2016, according to Google's Head of News, Richard Gingras (2016). Google determines whether an article contains fact-checked information by consulting schema.org ClaimReview markup. To ensure publishers' content gets the "Fact check" tag, publishers are encouraged to use that markup. Additionally, Google also considers websites that abide by the commonly accepted criteria for fact check (Gingras, 2016). The "Fact check" tag was a form of Google being product-centric in influencing the behavior of publishers to publish credible content.

Google also rolled out fact-checking features for Google Search. In its search results, Google will show the claim, who made the claim, and whether a third-party fact-checking nonpartisan website such as Politifact or Snopes has found the claim to be true, false, or in the middle (Glaser, 2017). However, Google did not proactively implement this policy – the fact-checking features were released to address the criticism the tech giant faced for spreading fake news and offensive information. In 2016, Google was heavily criticized for displaying a Neo-Nazi website as a top result for the search query about whether the Holocaust happened (Glaser, 2017). Hern (2017) cited instances of Google Home answering questions fueled with misinformation – obtaining information this way is misleading because a user of Google Home does not see the entire search results page to contextualize the answer. For example, when asked whether Obama was planning a coup, Google Home replied, "According to details exposed in Western Centre for Journalism's exclusive video, not only could Obama be in bed with the communist Chinese, but Obama may, in fact, be planning a communist coup d'état at the end of his term in 2016" (Hern, 2017). Google has never provided answers – Google has merely listed

out search results for users to decipher for themselves what they will believe. However, as Google branches from their expertise in Search into products such as the Google Assistant or Google Home, Google has to reconcile the subjectivity of information with the need to provide users with a simple and quick answer. Google Assistant should prioritize giving no answer over providing an inaccurate answer because a user's need for a credible answer should triumph a user's need for a quick answer.

As a corporate responsibility commitment, Google launched the Google News Initiative in 2018 to elevate and strengthen quality journalism, evolve business models to drive sustainable growth, and empower news organizations through technological innovation (Locklear, 2018). Locklear (2018) reported that Google has pledged to allocate $300 million to fund fake news fighting initiatives at Google. Due to its scale and impact, Google has to adapt its product based on pressing issues like fact-checking in the era of false news and must recognize its impact over information consumption in the digital age. Google has to tackle the fake news issue to address users' need for credible information.

Google adamantly claims it is not a media company (Helft, 2009). Still, Google could be considered a media platform because, similar to news aggregators and social media platforms, Google experiences high consumer usage and is able to sell ads as a result. For that reason, Google is considered a competitor by the news media industry in competing for consumer attention. More importantly, however, Google has been a major player in the disruption of the news media industry. Google was able to adapt to the desire for digital users to seek new information by using technologies, therefore digitalizing the user experience. The news industry, on the other hand, only digitized their existing newspaper product. The digital version of a newspaper failed to compete with Google to fill users' curiosity and hunger for information.

Case Study: Facebook.

Another company that filled the gap left when the news industry failed to digitalize is Facebook. Facebook is an online social networking platform developed by Mark Zuckerberg as a Harvard undergrad in 2004. Facebook facilitates information sharing through social networks and mapping the real world social connections of users. Zuckerberg launched "the facebook" as a digitized copy of the physical directory of students and staff at Harvard. Slowly, Zuckerberg discovered the potential to create a digitalized Facebook that allowed users to interact with others and information. Facebook went from connecting the Harvard community online to connecting communities at all U.S. universities and high schools, before extending to public use in 2005 (Phillips, 2007). Facebook connected communities of people with common interests, be it a hobby or a network of friends, to share relevant information within those communities. In the past, local communities were kept informed of important news and information through announcements in their local newspaper and radio stations. Facebook's ability to reach the scale and success it has today was paved by the failure of legacy media to digitalize and revamp its

product offerings for the digital consumer. Facebook tapped into the desire for humans to stay up-to-date with the communities they cared about, regardless of geographic proximity.

Besides digitalizing community engagement, Facebook also digitalized advertising. Facebook lowered the barrier to entry for users to use their platform by being free to sign up and use. Then, Facebook monetizes by selling advertising space on its platform. Unlike physical newspapers, the digital world is not constrained by limitations in advertising space. The scarcity in the digital world is the attention of the user. Bruce Schneier, the founder of the computer security company BT Counterpane, said, "Don't make the mistake of thinking you're Facebook's customer, you're not – you're the product" (Done, 2010). Facebook's customers are advertisers, by this logic. In their Hard Questions series, Facebook says (Goldman, 2018):

No. Our product is social media – the ability to connect with the people that matter to you, wherever they are in the world. It's the same with a free search engine, website or newspaper. The core product is reading the news or finding information – and the ads exist to fund that experience.

Facebook analogizes the monetization strategy of their social media platform to be akin to be that of a newspaper – both are commercializing on a user's attention. Crawford (2015) said, "Attention is a resource—a person has only so much of it." Facebook is a direct competitor to news publishers because both compete in the attention economy; both companies rely on the attention and engagement of users for advertising revenue.

While Google dominates the search engine marketing pie, Facebook definitely dominates the social media marketing pie, with 94% of marketers surveyed saying they have paid for ads on Facebook (Buffer, 2018). Sharma (2019) reported that in 2017, Facebook generated over $40 billion in revenue. A whopping 89% of Facebook's revenues come from digital advertisements (Sharma, 2019). Advertisers are able to target users based on the plethora of personal data Facebook has about its users. This information includes age, location, sexual orientation, marital status, income group, religious affiliation, and political affiliation, among many other categories. Facebook claims the personal data is anonymous and that advertisers only have the ability to target demographic buckets, not individual users. Advertisers are able to upload their entire product catalog and target specific demographics of users with Facebook Dynamic Ads (Sharma, 2019). Facebook recognizes the need to balance targeted advertising with the privacy of users. Facebook defended its model by branding targeted ads as relevant ads. Facebook justifies commercializing data and attention of users as providing relevant suggestions to users (Goldman, 2018).

In celebrating its 15 year anniversary in 2019, Facebook announced restructuring bonus structures for employees to be focused on social good, instead of business metrics like increasing engagement or userbase (Binder, 2019). This announcement came as a result of Facebook recognizing the widespread hate speech, fake news, and privacy violations that take place on

their platform. Facebook hopes that employees will be incentivized to help fight misinformation and other platform abuse. By moving from business bonuses to social good bonuses, Facebook is demonstrating its shift from product-centricity to customer-centricity, because Facebook is prioritizing the user experience over the product profitability.

Hate speech falls under the fake news umbrella, because, similar to many forms of fake news, hate speech is typically malicious and often politically-fueled. Not only does hate speech verbally attack a certain group, typically a minority, but hate speech is extremely harmful in spreading hateful views against a given group. On Facebook, hate speech perpetuates and thrives in echo chambers and within filter bubbles to a point where hate speech transforms into propaganda. Facebook relies on third-party moderators, user reporting, and Artificial Intelligence technology to flag platform abuse. Statt (2018) reported that the social media giant is attempting to decrease reliance on human moderators and lean towards Artificial Intelligence to reduce inevitable human bias in content regulation. In the documentary "Inside Facebook: Secrets of the Social Network," an undercover journalist reports Facebook's hands-off approach in dealing with flagged content in the form of hate speech from far-right groups (Statt, 2018). Facebook released a statement in response to the documentary to announce its efforts to review content moderation training. Facebook's vice president of global policy management, Monika Bickert wrote:

> We take these mistakes incredibly seriously and are grateful to the journalists who brought them to our attention. We have been investigating exactly what happened so we can prevent these issues from happening again.

Facebook's VP of Policy, Richard Allen, penned down Facebook's stance on free expression and how they are approaching moderating this public forum. The social media giant operates under three core principles: giving people a voice, keeping people safe, and treating people equitably (Allen 2018). With that, Facebook has to balance between respecting free speech rights and protecting users against harm through content moderation and, sometimes, censorship. While Facebook is not bound by international human rights laws, Facebook abides by Article 19 of the International Covenant on Civil and Political Rights (ICCPR) which is a framework for internet companies to apply human rights principles. The ICCPR upholds the universal right to freedom of expression, with two exceptions to restrict such rights: to respect the rights or reputations of others, and for the protection of national security or of the public order, or of public health or morals (Allen, 2018). Ultimately, these restrictions exist to prevent harm, if effectively enforced. Customer-centricity is not always straightforward because the needs of some users may compromise the needs of other users. However, certain rights should be prioritized over others. For instance, the right to safety should always triumph the right to free speech.

Additionally, Facebook claims to be cognizant of the accuracy or credibility of the content that their platform hosts. However, truth validation is extremely tricky, because the truth is subjective. Instead of blocking content for being untrue, Facebook's algorithm demotes the posts in users' news feeds when a piece of content is rated false by fact-checkers. Additionally, this change points users to a more accurate article on the same subject (Allen, 2018). Even if Facebook is not explicitly restricting the freedom of expression by blocking inaccurate content, Facebook is still imposing accuracy based on their valuation of accuracy and is able to push content that the platform deems as more accurate. Aside from actively promoting content that the platform has deemed as trustworthy, Facebook has also reported demoting clickbait stories (LeFebvre, 2018). The stance against blatantly removing false content from their site is due to Facebook CEO Mark Zuckerberg's intrinsic belief in the marketplace of ideas theory, with the exception of removing content that poses physical or tangible harm to other users. Zuckerberg said that promoting and demoting posts, rather than actively curating (by removing false) content is why Facebook is ultimately still a "platform" rather than a "publisher" (Delistraty, 2018).

Facebook recently had a policy change made in order to defend against imminent violence or physical harm provoked by misinformation. According to Allen (2018), Facebook is working with independent organizations who flag fake news and rumors that will likely have real-life violent consequences. Facebook takes and assesses those independent reports and from there decides whether or not to take down the post. Ultimately, the issues that Facebook is having to deal with are results of the digitalization of information dissemination. Facebook has to confront these issues to allow them to continue connecting communities in a healthy manner. Otherwise, there exists a gap in the market for a social platform that can regulate its platform responsibly. To understand the extent to which Facebook's failure to regulate its platform can spiral, allegations that Facebook is responsible for the ethnic cleansing of Rohingya Muslims in Myanmar must be investigated (McKirdy, 2018).

One of the most prominent and extreme examples of Facebook failing to regulate hate speech led to the rampant spread of anti-Muslim and anti-Rohingya rhetoric in Myanmar (Allison-Hope, 2018). The United Nations Human Rights Council launched an Independent International Fact-Finding Mission in Myanmar to conduct a criminal investigation and prosecution on the crimes committed by military and security forces (Allison-Hope, 2018). Facebook published the human rights impact assessment report that concluded that Facebook was not doing enough to regulate hate speech and prevent offline violence in Myanmar (Warofka, 2018).

On July 2nd, 2014, an angry mob protested outside a tea shop owned by a Muslim man. The Muslim man had been falsely accused of raping a female Buddhist employee in a blog post that was widely spread on Facebook. Among the distributors of this false information was Ashin Wirathu, an ultra-nationalist Buddhist monk who has made hateful speeches toward the Rohingya Muslim ethnic minority. One inaccurate Facebook post led to rioters torching cars,

people ransacking shops, armed men on motorbikes, and an imposed city-wide curfew (McLaughlin, 2018).

Facebook's Asia-Pacific director of public policy, Mia Garlick, responded to the violence by pledging to speed up the translation of the site's user guidelines and code of conduct into Burmese (McLaughlin, 2018). Facebook essentially admits to not having properly translated user guidelines and code of conducts into Burmese after operating in the country for three years. Garlick also elaborated on the process of reviewing flagged and offensive content. However, during the tea shop incident, Facebook had only one Burmese speaker based in Ireland to review flagged Burmese content (McLaughlin, 2018). The proliferation of hate speech in Myanmar was dwarfed by Facebook's excitement over the growing market. Aela Callan, a foreign correspondent on a Stanford fellowship, thinks that Facebook saw hate speech as a low priority in comparison to the exciting business opportunity of capturing massive market share. In other words, Facebook failed its users because it acted in a product-centric manner by prioritizing business growth over social good.

Stecklow (2018) reported that Facebook still outsources its hate speech monitoring from abroad as a secret operation by Accenture called "Project Honey Badger." Facebook relies on user reporting to detect hate speech, especially in Myanmar, because hate speech in Burmese is too context-dependent for Facebook's Artificial Intelligence technology to detect. Douek (2018) reported the subtleties of slurs and euphemisms used in anti-Rohingya hate speech, requiring knowledge of history and context to decipher its meaning. Reuters reported a Burmese post that said, "Kill all the kalars that you see in Myanmar; none of them should be left alive" being translated to English on the platform to "I shouldn't have a rainbow in Myanmar" (Douek, 2018). Facebook grew so quickly in Myanmar without fully understanding the local nuances to act on obvious violations to the terms of use of their platform. As McLaughlin (2018) puts it, "All of these reflect a decidedly ad-hoc approach for a multi-billion-dollar tech giant that controls so much of popular discourse in the country and across the world." How did Facebook become so influential in Myanmar?

In 2011, the new President of Myanmar liberalized the country's telecommunications sector. Previously, the state-owned telecommunications firm had a monopoly over the Internet connection. The political and social change in Myanmar fueled Facebook's rise in the country. In 2013, the state-run New Light of Myanmar newspaper declared, "a person without a Facebook identity is like a person without a home address" (McLaughlin, 2018). In the two years, Internet users in Myanmar rose from 510,000 to 1,353,649, growing from 1% of the population to 2.5% (Live Internet Stats, n.d.). Facebook users in Myanmar grew from 1.2 million in 2014 to 18 million in 2018, increasing more than tenfold (Stecklow, 2018). Stecklow (2018) from Reuters described Facebook as being so dominant in the emerging economy as to essentially be the Internet. Facebook is one of the only websites that Burmese Internet users access.

Facebook effectively was the Burmese public's introduction to the Internet. Myanmar was part of Facebook's project called Internet.org, which was framed as a humanitarian project to provide internet service to the world as if it were a universal basic need (Hempel, 2018). Internet.org was framed as a do-gooder project, when, in reality, it was an alternative way for Facebook to increase its user base; in partnering with local internet providers, Facebook made sure it became the centralizing platform for the Internet (Hempel, 2018). Zuckerberg faced heavy criticisms that Internet.org was a method for Facebook to take over the web. Facebook has been accused of compromising on user privacy and security in favor of rapid adoption and expansion, ultimately saving on data transmitted. Hempel (2018) reported that Facebook reacted by rebranding Internet.org to Free Basics, increasing the app to more services, and improving user privacy. Facebook only pledges to be more responsible when there is public outcry or literal violence, and has yet to learn its lesson.

The tea shop incident was not the first of its kind in Myanmar. Myanmar has seen waves of violence between the Buddhist majority and Muslim minority since free speech and internet access liberalized in 2010. Mozur (2018) reported that the anti-Rohingya propaganda on Facebook did not come from everyday internet users, but from members of the Myanmar military. McKirdy (2018) reported on CNN:

> An independent United Nations investigation into alleged human rights abuses carried out against Rohingya Muslims in Myanmar has called for the country's military leaders to be investigated and prosecuted for genocide, crimes against humanity and war crimes.

Zuckerberg shared Facebook's three-pronged strategy to address issues in Myanmar: ramp up its local language content reviewers, take down hate speech spreading accounts and groups, and introduce products designed for Myanmar. Myanmar and the world are left to see whether Facebook is successful in dealing with the ongoing issue of hate speech toward Rohingya. Facebook released statements in 2014 after the tea shop incident, pledging to act and operate more responsibly in Myanmar (McLaughlin, 2018). Yet, in a separate event in 2016, the Burmese military was accused of ethnic cleansing and genocide on the Rohingya Muslims (Mozur, 2018). The United Nations Fact Finding Mission (FFM) acknowledged Facebook's improved responsiveness in Myanmar but found the response "slow and ineffective" (Douek, 2018). Even after complicity sparking the tea shop violence, Facebook did not adequately devote resources in dealing with hate speech in Myanmar and concedes it did not take enough actions to prevent genocide.

Facebook's disastrous presence in Myanmar is a direct result of the social media giant expanding beyond its means. Facebook failed to translate their terms of use into Burmese before operating in the market for over three years. Facebook failed to educate its Burmese users, most of whom were new to the Internet. Facebook was unable to hire sufficient Burmese-fluent moderators. Facebook did not understand the local market before entering it. Facebook reduced

the bandwidth used, effectively compromising the security on its app and website in emerging economies to operate in higher quantities but at a lower quality. Facebook's woes in Myanmar are an extreme example of the implications of a company growing beyond its means. Moving forward, Facebook has to take a proactive approach to connect communities through stories and interactions. Facebook has proven that companies cannot be complacent with digitalization. After digitalizing, companies need to monitor the interactions of their platforms to identify issues that will inevitably arise. Certainly, Facebook has been successful in meeting the needs of digital consumers to stay connected to their communities. But, Facebook has a long way to go in eradicating abuse on its platform and building systems that will allow Facebook to scale responsibly. Moving forward, Facebook should expand its platform only as quickly as it can expand its ability to serve user safety needs, as a demonstration of being customer-centric over being product-centric.

Case Study: Wikipedia.

Wikipedia is a platform that digitalized information in a scalable and self-regulating manner. Similar to Google, Wikipedia digitalized the human desire to learn more about any given topic through a digital encyclopedia of openly editable topic pages called wikis. Wikipedia balances the accuracy of information with the democratized access to publish. While Wikipedia is technically a publisher, Wikipedia relies on users for content, much like platforms like Facebook and Twitter, and is therefore often compared to platforms rather than publishers. Wikipedia is comprised of more than 40 million articles in 301 different languages that are written and edited by Internet users (Safer, 2015). Over time, Wikipedia has developed editing restrictions, the process to review changes on articles, and various policies to balance the inclusion of information with the accuracy and relevance of said information to the topic. In fact, Wikipedia is perceived as so reliable as a living and evolving source of information that YouTube announced utilizing Wikipedia articles to distinguish fake news by linking controversial posts to the corresponding Wikipedia article for additional background. Facebook also announced that they will be using Wikipedia to mitigate fake news, but Wikipedia will provide the background of the source of the information, not on the topic itself (Cohen, 2018).

Wikipedia has successfully maintained the validity of the information published on its millions of wikis through its editing and verification processes. Anyone can edit anything on Wikipedia, but those edits may be rejected if there is no source cited or the source quality is weak. Victor Grigas, a veteran editor of Wikipedia and video producer at the Wikimedia Foundation, shared that when you begin editing Wikipedia and understanding the guidelines on how to edit wikis, you essentially get a crash course in library science and intellectual property law (Pearl, 2016). Grigas ridiculed Facebook's content regulation policies compared to Wikipedia, "If Wikipedia's rules were applied to Facebook? Oh my God! They'd lose 99 percent of their content" (Pearl, 2016). While Gringas is right, he does not consider that Facebook cannot

regulate content like Wikipedia. Wikipedia is serving the need of users to discover credible information, whereas Facebook is serving the need of users to connect to local communities.

Wikipedia has to deal with its unique fake news issue: wiki vandalism. A wiki is deemed vandalized when a user edits a wiki in a malicious or disruptive way – this could include adding, removing, or modifying sections of a wiki to be inaccurate but funny or offensive. Wikipedia has been dealing with the issue of fake news since its inception and developed institutions to self-heal and scale over time. Wikipedia is able to identify and repair wiki vandalism by effectively analyzing its edit history. Wikipedia's model of open and anonymous collaborative is surprisingly effective – IBM researchers measured how long edits stay live on Wikipedia and found that compared to all content that stayed on the site for a median of 90.4 minutes, wiki vandalism that entailed deleting at least 90% of the original wiki only remained on the site for a median time of 2.8 minutes. If the wiki vandalism that deleted more than 90% of the original wiki also added obscene words on the wiki, the edit had a median survival time of 1.7 minutes (Viegas, Wattenberg & Dave, 2004). Wiki vandalism is repaired so quickly that end users will hardly ever notice the effects of vandalism due to Wikipedia's "surprisingly effective self-healing capabilities" (Viegas, Wattenberg & Dave, 2004).

The edit history of a wiki is core to Wikipedia's self-healing capabilities. When vandalism on a wiki is detected, the wiki quickly reverts to its prior version. There are four ways to detect wiki vandalism: bots, recent changes patrol, watchlists, and incidental discovery. With bots, wiki vandalism gets detected by a bot and fixed without human intervention. Any time a wiki is edited, the edit is listed on a special page that is monitored by editors for vandalism. Watchlists are bookmarked pages that a given user has flagged of interest to them, typically to monitor for vandalism. Lastly, anyone who comes across a vandalized wiki can report the vandalized wiki. However, Broughton (2008) writes in his book that incidental discovery became rare due to the success of the other vandalism removal efforts.

Unlike Facebook and Google, Wikipedia is hosted by a non-profit organization, the Wikimedia Foundation. The Wikimedia Foundation is funded by donations from Wikipedia users, institutional grants, and gifts (Wikimedia Foundation, n.d.). Orlowski (2015) disclosed that the Wikimedia Foundation has over $70 million in assets, millions of which are in cash. Orlowski (2015) reported that only around $3 million is required to run Wikipedia yearly. To fundraise, Wikipedia persuades site visitors to donate in order to keep the site running. Head of communications for the Wikimedia Foundation Jay Walsh said that the most effective fundraising campaign was the yellow plain text direct message, even compared to the face of the founder and CEO, Jimmy Wales, asking for donations (Greenfield, 2012). *Figure 3* is an example of the call for donations by Wikipedia. First, Wikipedia provides background on the operations of the website, from the costs involved with running the website, to the commitment against running ads or taking government funds to stay as independent as possible. After providing some background on why Wikipedia needs donations, Wikipedia anchors the reader

by sharing that the average donation is $30. Then, Wikipedia asks users to donate $5, only a fraction of the average donations. Wikipedia persuades users to donate by telling users that their individual contributions are impactful because if every user who reads their fundraising banner donated the suggested $5, Wikipedia would be done with their fundraiser within an hour. Wikipedia is able to be fully funded by user donations by successfully communicating its value proposition of information neutrality.
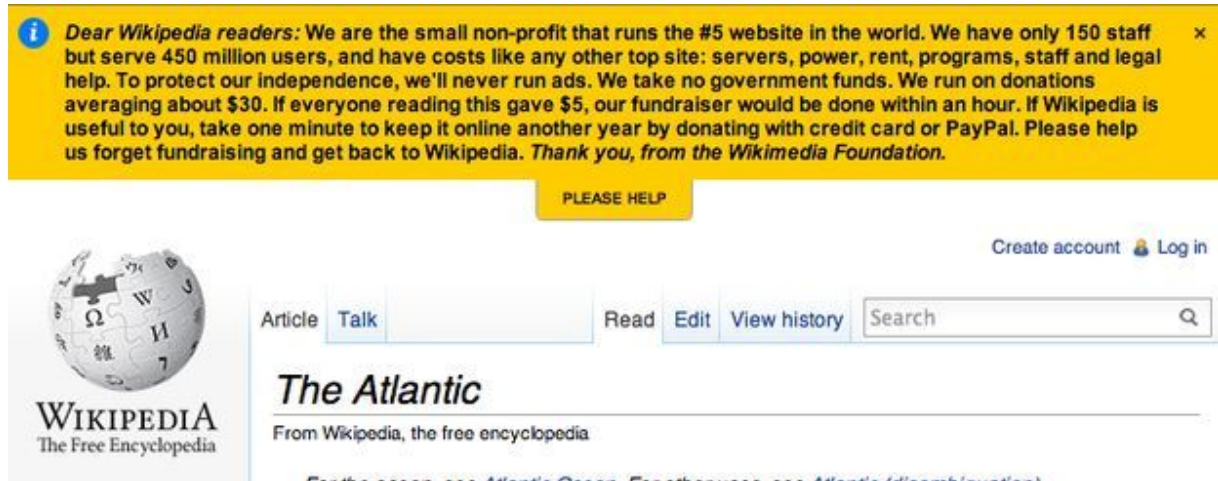
Figure 3. Screenshot of the Wikipedia banner asking for donations. Taken from Greenfield, R. (2012, November 27). Retrieved from https://www.theatlantic.com/technology/archive/2012/11/creepy-jimmy-wales-face-might-still-come-wikipedia-donation-banner/321113/

   Wikipedia has seen its fair share of scandals. For example, Wikipedia has seen vandalism from high-profile individuals trying to make themselves look better. Riley-Smith (2015) reported the wikis of British MPs being edited to omit scandals – the edits were made by anonymous users but traced back to computers with IP addresses linked to the Houses of Parliament. The scandals omitted included the arrest of MP Craig Whittaker for assaulting his son in 2012 and details of the 11-year affair of MP Robert Blackman, who praised the sanctity of marriage (Riley-Smith, 2015). Following the news of British MPs allegedly sanitizing their Wikipedia pages, multiple Twitter bots surfaced to track Wikipedia edits made from the IP addresses of U.S. Congress, the Canadian government, and tech giants Google, Facebook, Apple, Twitter, and Wikimedia Foundation (Cush, 2015).

   There have also been scandals around entities being blackmailed for positive coverage on Wikipedia by scammers. The Independent (2015) reported that Wikipedia blocked 381 accounts that were complicit in demanding entities for money in exchange for Wikipedia help. The victims of blackmail included a Dorset-based wedding photographer, a high-end jewelry shop in Shoreditch, and a former Britain's Got Talent contestant (Merrill & Owen, 2015). Wikipedia suspects that many of the blocked accounts were "sock puppets" – it is likely that one or a few

people control multiple accounts. These scammers targeted entities attempting to get wikis published about them on Wikipedia because the wikis were deemed to include an excess of promotional material. In some cases, the scammers were the ones blocking the publishing of said wikis. The scammers would message the entities to solicit monthly payment to help publish and maintain the wikis. Using the sock puppet accounts, scammers reviewed their own edits and circumvented the true peer review process (Merrill & Owen, 2015). The scammers identified the loophole with Wikipedia's peer-review processes and exploited it. "Neutrality is key to ensuring Wikipedia's quality. Although it does not happen often, undisclosed paid advocacy editing may represent a serious conflict of interest and could compromise the quality of content on Wikipedia," said a Wikipedia spokesperson (Merrill & Owen, 2015).

The scammers may not have been that original – in 2012, reports surfaced that a trustee of the Wikimedia Foundation UK and another Wikipedian in Residence were selling brand visibility on Wikipedia. During the scandal, there was no policy against "paid editing" in Wikimedia UK's policy. Wikipedia has since included the clause against PR editing, paid or unpaid, especially by Wikipedia representatives to prevent compromising the neutrality of Wikipedia (Blue, 2012). Today, Wikipedia lists guidelines and disclosures regarding paid editing to disclose conflicts of interest in their editing. Paid editors are put under close scrutiny to ensure editors abide by Wikipedia's terms of use. Ultimately, efforts to ensure users are positively contributing to Wikipedia is integral in the reliability and integrity of the digital encyclopedia. Michael Skirpan, a Ph.D. student at Colorado University, told Motherboard (2017):

> Wikipedia's status as an advertisement-free, well-referenced source for information and reference is integral to its utility. If it will remain a truly open platform, protecting this goal will require investigations into prolonged disputes in which a suspected but undisclosed paid actor continues to edit in misleading ways.

Wikipedia taught its users how to publish wikis. Wikipedia taught and are constantly training their community editors on how to edit wikis that best align with Wikipedia's pledge to facts and neutrality. Other platforms can learn from Wikipedia that users can be influenced and abide by mechanisms and rules that are aligned with the website and users' values. Wikipedia upholds its value of openness by continuing to allow anyone to edit and contribute anonymously. Wikipedia also balances its value of upholding the accuracy and quality of their content through developing mechanisms to ensure only the valid edits are approved and published. Wikipedia is the prime example of developing a community that participates voluntarily and religiously abides by rules by bringing together a community that believes in the values of the product. Wikipedia successfully digitalized the desire to learn more about a specific topic, but Wikipedia also managed to respond to the rise of platform abuse, wiki vandalism, by developing rules and mechanisms for the platform to self-regulate at scale. Moving forward, Wikipedia should

continue making decisions to improve the credibility of wikis to appease users, who contribute donations because they value Wikipedia's dedication to neutrality.

Monetization

The news industry also failed to digitalize another core aspect of their business and product: their monetization strategy. In addition to losing the value proposition of connecting communities to relevant information, the news industry merely digitized their monetization strategy. Furthermore, consumers are no longer relying on one or a few news outlets for their news – news is ubiquitously available from various sources at little to no cost to the end-consumer. Once users stopped being reliant on news outlets, it became difficult to monetize news. The disaggregation of media loyalty has impacted publishers' traditionally steady revenue streams: advertising and subscriptions. Picard (2011) posited that because print media penetration has been declining, there has been a reduced appeal for advertisers to use print media to reach the public. The decline in advertising demand has turned news outlets to a paywall strategy. However, there is an argument to be made against putting content behind a paywall. One respondent from a survey conducted by Reuters is quoted (Newman, 2018):

> Fake news threatens to undermine democracy all around the world. Faced with this threat, news publishers can't afford to retreat behind paywalls: we need to be out there, in people's newsfeeds, challenging the lies at scale, treating disinformation on social media platforms as an urgent frontline beat.

There seems to be a tension between the role news media assumes in democratic societies and the ability to be profitable. Industry-wide, more and more publishers are increasing their reliance on paywall subscriptions. But if all the reputable news sources are behind a paywall, what will be left to challenge the content thriving on platforms? How can the business model of news publishers change to adapt to the digital age, while working to reduce the prevalence of misinformation? The news industry needs to digitalize its monetization strategy on top of digitalizing their value proposition. News publishers should meet business objectives as a means to the end of meeting the needs of customers.

Advertising

When news outlets first started publishing their content online, news outlets relied on advertising as their main monetization model. In 2005, the newspaper industry peaked its revenue from advertising at $49 billion, accounting for 82% of newspaper revenues (Mitchell & Holcomb, 2014). Digitization has undermined the key value proposition that publishers used to serve audiences: curation. Readers consume content differently on screens than they did on newspapers – more and more readers are relying on aggregators for their main source of news according to research by Reuters (Newman, 2018). Users spend more time on Facebook and Google, making those technology platforms more attractive to advertisers than digital publishers.

Additionally, Facebook and Google also digitalized their advertising services by allowing advertisers to target specific demographics of users and search queries, which made advertising more effective and strategic. Facebook and Google are so dominant in the digital advertising market that the rest of the digital advertising market is competing for their leftovers – both companies account for around 60% of the digital advertising market as shown in *Figure 4*. Brian Nowak, an analyst at Morgan Stanley, claimed that for every new dollar spent in online advertising in Q1 of 2016, 85 cents went to Facebook or Google (Herrman, 2016). Ex-Guardian editor Alan Rusbridger attributed The Guardian falling short of the £100m forecast, with only £81.9m in online revenues in 2015 to The Guardian not fully understanding Facebook's algorithm. With Facebook acting as an intermediary between content creators and consumers, content creators must constantly be playing catch up to adapt (Henshall, 2017). News outlets are having to advertise on Facebook, instead of being the advertising platform themselves.
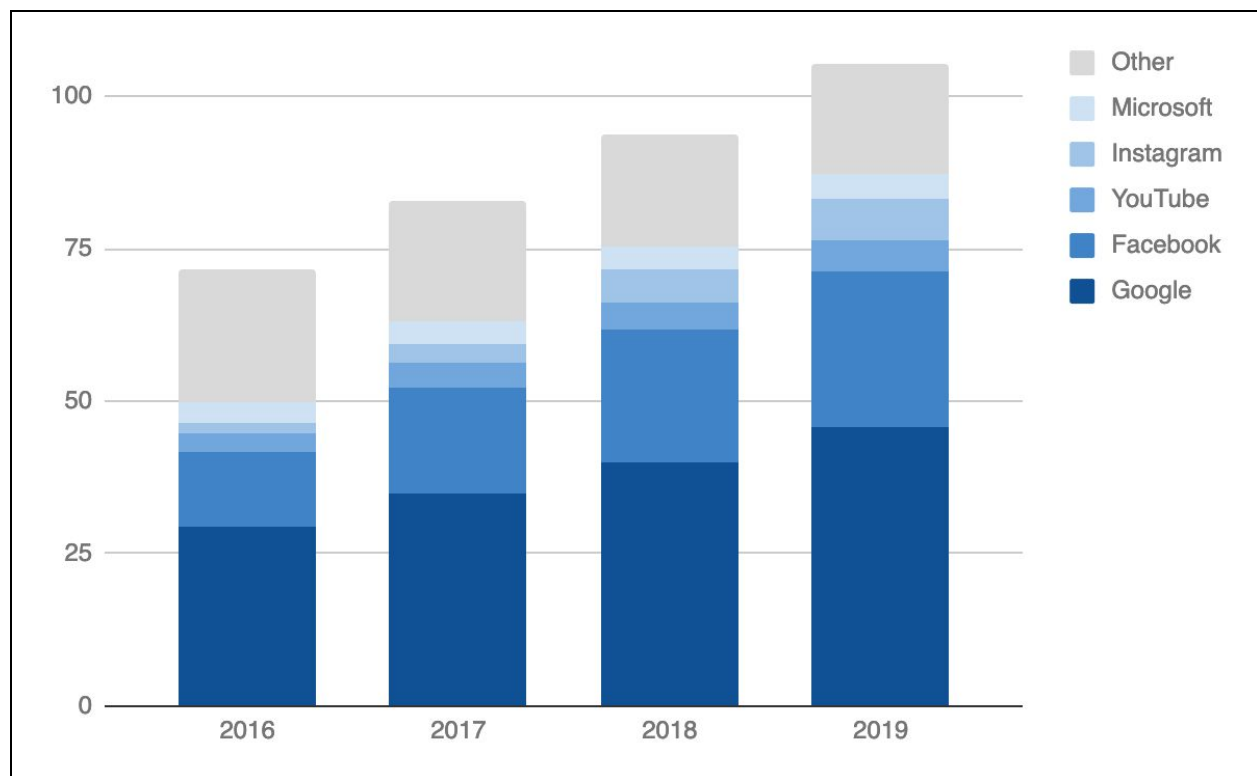
Figure 4. U.S. Digital Advertising Revenues, by company, 2016-2019 (in billions). Adapted from "Google and Facebook Tighten Grip on US Digital Ad Market" by eMarketer, 2017. Retrieved from https://www.emarketer.com/Article/Google-Facebook-Tighten-Grip-on-US-Digital-Ad-Market/1016494

The digitization of news outlets meant the digitization of advertising on news publications. Physical banner ads on newspapers transformed to digital banner ads on news websites. Advertisement, just like news, had to evolve to utilize digital technologies when digital

banner ads slowly became less effective. The click-through-rates on traditional digital ads such as banners and pop-ups dropped from above 9% in 2000 to almost zero in 2015 (Pittman, 2014). Advertisement needed to undergo digitalization. Publishers have to utilize digital technologies in their advertising strategy, like harnessing the power of data for retargeting and analytics. Just like how Facebook and Google built tools for advertisers to target certain user groups or search queries, publishers should build tools for advertisers to target relevant content. In Accenture's report on researching "The Future Of Advertising," an advertiser's executive director echoed the emphasis on personalization and targeting for effective engagement with advertisements. The future of advertising will need to incorporate the advertising message in compelling content, which would fuel the rise in popularity of branded content and native advertising (Accenture, 2016).

Native advertising blurs the line between advertising and content. By disguising advertisements as content, advertisers address the growing issue of consumers blatantly ignoring ads – thus increasing the effectiveness of their digital ads. A study conducted by Wan-Infra and the Native Advertising Institute reported that native advertising generated 20% of all advertising revenue for news media organizations in 2017; Native advertising is very important to 52% of publishers' overall ad strategy (Bizcommunity, 2018). However, content skepticism among consumers is rising due to various factors, including the increased awareness of fake news (Overmyer, 2017). The growing skepticism for content may have spillover effects on native advertisements that appear to be fake or deceptive. Still, native advertising has the potential to be the digitalized solution for news outlets to compete with other digitalized advertisers like Facebook and Google.

According to Pittman (2014), there are three buckets to categorize native advertising: sponsored content, recommended content, and in-feed social ads. Sponsored content is a form of native advertising where advertisers commission content creators, be it a website like Buzzfeed or a social media star, to create content but have promotional intent. The promotional intent could manifest from strategic product placement in a movie to a product review. For example, Netflix commissioned the Wall Street Journal to report about the violence among cocaine traffickers to promote the new Netflix show, "Narcos*" ("Cocainenomics", 2015). The sponsored content was produced by the Wall Street Journal's Custom Studio, the WSJ's advertising department, which is distinct from the WSJ's newsroom. The sponsored content included written, visual, and video excerpts from *Narcos* and other interactive components to engage readers.

Recommended content is a form of native advertising where content platforms recommend users to content from the platforms' sponsors. For example, CNN.com displays links "From Around the Web" after their CNN original content, which is third-party sponsored content. CNN seamlessly blends advertisement into the customer experience. Through the pay-per-click model, CNN gets rewarded for the traffic that CNN drives to the advertiser's site.

Since readers come to CNN.com to consume content, those readers will presumably want to consume additional content, which is where recommended content comes in. CNN.com recommends content from their sponsors and more of their own content, hoping to catch readers' attention and thus prolong the user's engagement with CNN.com.

In-feed social ads are native advertisements designed to seamlessly integrate with the rest of the content on user feeds. A key distinction with these ads is that in-feed social ads usually aim to promote a brand's content marketing materials – these brands are trying to educate consumers to see the value in their value proposition. In-feed social ads promote content primarily to increase brand awareness. Increasing brand awareness may result in a purchase later on, so the in-feed social ads act as the initial touchpoint with the customer. An example of content marketing would be Hubspot publishing blog posts about topics related to sales, marketing, and customer service to promote their software offerings in those topics. An example of in-feed social ads would be if Hubspot paid Forbes for in-feed advertising space to promote those blog posts.

In traditional advertising, advertisements are created by advertising agencies and then hosted on publishers and platforms. With native advertising, the publishers will play the role of the advertising agency for advertisers. Hansen (2017) clarified that the rise of native advertising certainly does not mean the death of advertising agencies, because advertisers generally maintain multiple advertising relationships to serve a variety of advertisements. Traditional advertising agencies have to develop new competencies to meet the increased demand for native advertisements and alternative forms of advertisement (Hansen, 2017). Similarly, publishers that want to create more native advertisements must develop the skills necessary to produce compelling advertisements. Advertisements and news stories both require the art of storytelling, but advertisement requires the art of selling a compelling brand and product. In his "Copyranter" column on Digiday, Duffy (2015) opined that native advertising is either dumb or boring because the advertisement often lacks creativity. As an advertiser himself, Duffy is not impressed by the quality of native advertisements created by publishers. A survey by HubShout found that an abysmal 5% of users recall the content and brand of the last sponsored article they read (Moses, 2014). Duffy (2015) hypothesized that these results can be attributed to the fact that native advertisements do not resemble ads but editorial content, and because the native advertisement was not persuasively designed to promote brands or products.

According to the Media Insights Project (2016), 63% of digital news consumers believe it is vital that ads do not interfere, otherwise consumers perceive news reporting sources as less trustworthy. However, the research does not conclude that unobtrusive advertising results in less trust in news reporting sources. Disclosing advertisements and sponsorships have become an important industry practice to inform the public of potential conflicts of interests. Federal institutions like the Federal Communications Commission and Federal Trade Commission enforce guidelines for advertisements to be disclosed. Chief strategy officer at Barton F. Graf

9000, Laura Janness, shared that her company does not believe in tricking users with their advertisements but instead engage users with brands through advertising, she said "[...] Great advertisement doesn't have to disguise itself" (Beer, 2016).

Similarly, given the issues platforms are facing with their digitalized products interacting with consumers, news outlets have to consider how consumers will interface with their digitalized advertisements. The key to digitalized native advertising lies in utilizing digital technologies to facilitate user interaction with the advertising brand to entertain, educate, or inform users.

Case Study: The Outline.

The Outline is an example of a news outlet that offers a digitalized version of native advertising. The Outline is the brainchild of Joshua Topolsky, a digital media veteran who co-founded The Verge and Vox Media, and formerly served as editor-in-chief of Engadget and editor at Bloomberg (Doctor, 2016a; Ingram, 2016; Goggin, 2019). The Outline aims to be a publication that is perceived as both stylish and substantive. Topolsky wants to target millennials who are tech-savvy, passionate about issues, intelligent, and want to read interesting and engaging stories (Doctor, 2016a). The publication is hosted on a website and is highly optimized to the mobile viewing experience. Users swipe through a story, emulating flipping through a magazine. The Outline's app presents articles in the form of stacks of cards that users swipe through to navigate editorial content (Ingram, 2016). The Outline presents its content in a way that leverages technology and the existing behavior of users of their target readership. The design of The Outline is aesthetic, interactive, and endless – The Outline has an infinite scroll so users can continuously discover more content. Vice president of strategy and UX at design studio OneMethod, Lanny Geffen, commented about The Outline's user experience (Stinson, 2016):

> My feeling when I look at something like this is it's the experience that I'm supposed to consume. I'm supposed to flip through and have a messy, curious, where-do-I-go-next kind of experience. And that's authentically digital.

In between the endless cards of stories are native advertisements. Topolsky is passionate about proving that advertising is a viable monetization strategy for digital publishers (Main, 2017). Topolsky emphasized the role of design in creating a digital experience for his audience on The Outline. Design is the key component in blending and masking advertisement. Topolsky argued that internet advertising is not broken, but merely unevolved. He analogized the use of a standard box or banner digital ad to replacing a television ad with a magazine ad. The Outline doesn't just customize the ads they host on their website, they build them. Custom advertisements resemble magazine ads by being full-screen and visually appealing (Ingram, 2016). The Outline recognizes the importance of creativity and artistic vision in developing native advertisements. To create custom advertisements, The Outline built tools such as fact cards, draggable comparisons, and a desktop and mobile-friendly game for The Outline's content

management system (Main, 2017). For example, The Outline built an interactive driving game for Cadillac where readers spend an average of 2.3 minutes playing the Night Driver Game shown in *Figure 5* (Main, 2017).
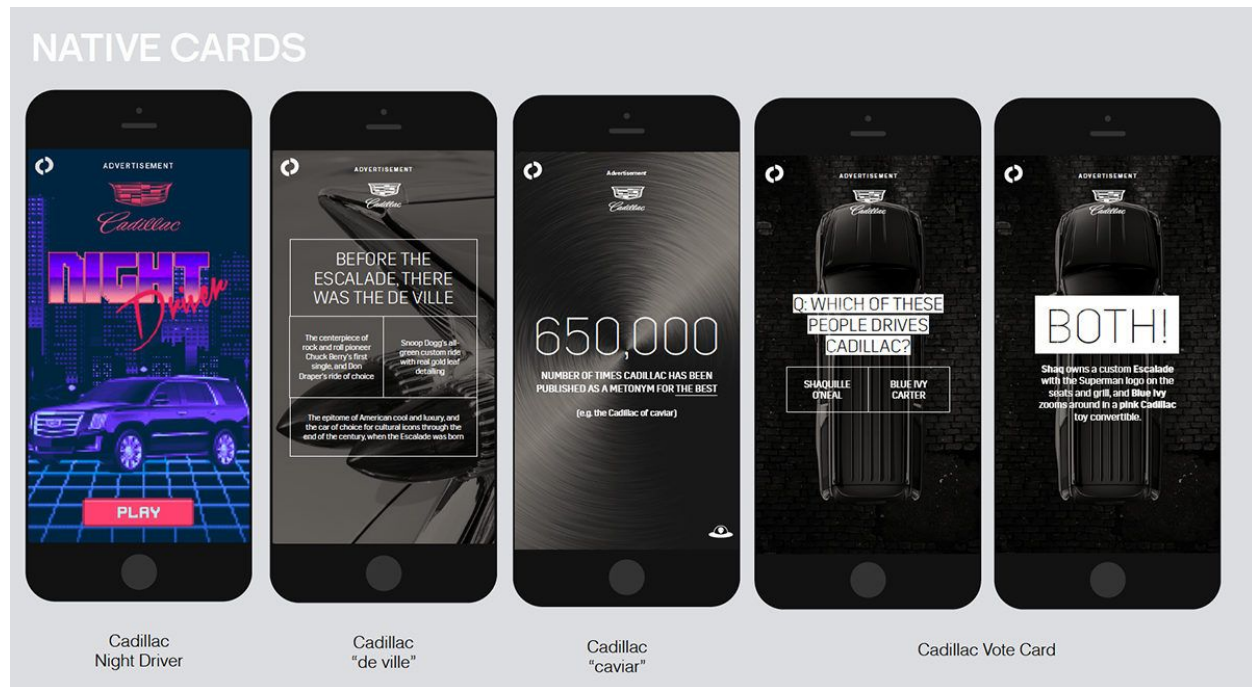
Figure 5. An example of The Outline's custom native advertising developed for Cadillac, an interactive game. Taken from Main, S. (2017, February 28). Retrieved from https://www.adweek.com/digital/the-outline-is-making-visual-interactive-content-and-ads-for-a-post-text-internet/

The Outline is selective with the advertisers they work with, in addition to limiting the number of advertisers they work with to maximize the quality and customizability of the advertisement (Johnson, 2018). The Outline charges an average of $120,000 for its custom advertisement (Mulin, 2018). Digital publishers traditionally rely on advertising revenue at scale to be profitable – high volumes of traffic are compelling to advertisers for impressions and visibility. Instead of aiming for quantity, however, The Outline boasts aiming for quality. To advertisers, The Outline cannot offer the scale of publisher giants, but Topolsky claimed in a podcast interview with Recode (2018), "[...] we monetized about 9-10 times higher per user than most publishers." The Outline receives, on average, 25 times on click-through rate and 13 times on engagement rates compared to the industry average on their advertisements (Main, 2017).

Whether The Outline will prove to be the success story for native advertising is yet to be determined. Its valuation stands at $21.15 million, only two years since its inception (Mullin, 2018). According to Crunchbase (2019), The Outline has received $10.2 million in two rounds of funding in 2016 and 2018. Most of its funding has gone toward building the content and product

– digital media startups typically spend 60-70% of funding on their content and product, while legacy media only allocate 20% (Doctor, 2016a). Topolsky said that he steered clear of raising too much money because it was important to him to build a scalable business (Mullin, 2018). Ingram (2018) reported several sources disputing Topolsky – The Outline was allegedly desperately seeking more funding due to its high burn rate but could not find enough interested investors. Sources also claimed that The Outline was quickly running out of runway (Ingram, 2018).

In 2018, The Outline fired six employees: two staff writers, two front-end developers, an executive assistant, and a revenue associate (Bonazzo, 2018). Topolsky faced backlash for saying that the staff writer layoffs were due to underperformance. After releasing an apology statement, Topolsky claimed the recent layoffs were due to inaccurate revenue forecasts (Goggin, 2019). The Outline's financial woes may not be limited to over projections of revenue, but also the underestimated costs of customized advertising, which is both labor and time intensive. While the advertisements claim to be more effective, their cost may be more than their yield (Goggins, 2019).

Due to the fact that Topolsky never replaced the retrenched employees, critics suspected Topolsky was going to rely on freelancers for content on their site. Study Hall, a collective of freelance writers, pledged to boycott The Outline as a stance against firing full-time staff writers and increasing reliance on freelancers (Bonazzo, 2018). Topolsky denied the allegations of The Outline replacing full-time staff with freelancers, adding that 70-80% of The Outline's content has always been sourced to freelancers. Additionally, The Outline announced that it was relocating out of their Lower East Side office to a coworking space in efforts to save money and having its remaining staff take pay cuts (Bonazzo, 2018). The Outline is in a financially vulnerable position based on the latest news of reducing staff count, moving into a WeWork, and forcing employees to take pay cuts. According to Topolsky, however, The Outline is not in a financially vulnerable position. The recent changes have been to strategically cut cost to bring the publication closer to profitability (Goggins, 2019).

The Outline demonstrates that digitalizing is not enough to solve the problems of the industry. While The Outline is piloting a new digitalized version of native advertising by building out custom tech-enabled advertisements for its advertisers, The Outline has to finetune the economics of the cost of developing with the superior results of high-tech advertisements to fund the kind of journalism Topolsky aims to provide its sophisticated users.

Paywalls

News media also digitized another monetization model from their print predecessors: subscriptions. In the print era, newspapers relied on their readers to pay for a subscription for a physical copy of the daily paper to be delivered to the reader's doorstep. News outlets

cannibalized their own product when they put their content online and offered it for free. Initially, news outlets were optimistic about putting their content online for free, because the Internet provided exposure to a larger consumer segment, which was seen as an opportunity for news outlets to monetize through advertising. However, digitized advertisements such as banner ads and pop-ups proved no competition to the digitalized advertising solutions provided by Google or Facebook (Madrigal, 2017). News outlets didn't realize their product was actually curation, not content. Facebook and Google dominated the direct relationship to consumers. News outlets attempted to recapture their direct financial relationship with their readers by introducing a paywall (Madrigal, 2017). The most loyal readers are willing to pay because they understand that rigorous journalism is costly. However, the pool of loyal consumers to the many news outlets who flopped with their digitization strategy is shrinking. In the past decade, news outlets have been straining the relationship with their loyal readers through bombarding readers with advertisements (Masnick, 2018). The success of the paywall strategy relies on the customer's willingness to pay (Izdebski et al., 2013). News outlets need to convince consumers that they should be willing to pay for content before news outlets will see returns on a paywall strategy. Ultimately, publishers need to digitalize their relationship with readers through a suitable paywall strategy and by thinking of their subscribers as community members.

        News outlets pursuing a paywall strategy will have to create flexible and adaptable solutions to fit different customer's needs. This could entail having various ways to charge a consumer for content, including pay-per-article, providing previews to content with limited access, a freemium model, a limited and cheaper subscription, and unlimited access to content (Vollmer, 2018). These paywall variations are on the spectrum of hard to leaky – hard paywalls restrict access to content to subscribers; leaky paywalls allow non-subscribers to access content either through a free trial, data collection, or other promotional means (Garcia, 2017). Different paywall strategies will attract different customers and affect those customer relationships differently. For example, employing a hard paywall could be a missed opportunity to build a relationship with readers who are trying to access a variety of publishers at a low cost – a pay-per-article model may be more suitable. On the flip side, a brand loyalist will not want to pay for every article they read; they would rather pay a monthly subscription. Publishers have to digitalize their paywall strategy to appeal to the different consumer segments that may have varying levels of willingness to pay.

        Similar to the misconception that a publisher's product is content, not curation, publishers should be wary in viewing their paywall strategy as merely a monetization strategy. In reality, subscribers are members who support the brand. Publishers should not feel constrained to only interact with consumers digitally or through their content. Publishers need to build communities and identity around subscribers, which could entail providing offline experiences or products. For example, the New Yorker tote bag is more than a free gift for subscribing, it is a status symbol that signals the bag holder's sophistication. The New Yorker tote bag adds to a person's

visual identity as being part of a refined and cultured tribe (Albrecht, 2017). The Wall Street Journal (WSJ) launched WSJ+ to turn subscribers into members. WSJ+ members have access to invite-only events for members to interact with the publisher and other members. Activities at WSJ+ events range from panel discussions, performances from artists, and private film screenings (Ellis, 2014). Other publications like The Guardian and The New York Times also have their own membership program with access to events and discounts but charge a premium for membership as an added source of revenue (Ellis, 2014). Publishers should also think beyond editorial content to address the user's need to engage in ideas and communities.

Paywalls may be a viable revenue model for news outlets but may also threaten the role of news in society. Paywalls have the potential to further perpetuate filter bubbles. Audience political alignment is likely to be consistent with the ideological views of the publisher. The people who would pay for content would be the group of people who already agree with the viewpoints of the publishers. Beyond facilitating filter bubbles, paywalls also remove high-quality journalism and reporting from competing in the marketplace of ideas. Either way, paywalls as a strategy are problematic because they threaten the role of news as a catalyst of discourse. In this sense, paywalls can be seen as a great product strategy but a poor customer strategy because paywalls will serve as a barrier to high-quality reporting from enlightening society. The New York Times (NYT) has seen great financial success with their implementation of a paywall, however, some analysts challenged conflating the NYT's success with their paywall strategy as being heavily influenced by the "Trump Bump." The Trump Bump is known as the increase in digital news subscriptions as a result of Trump's presidency: The Times enjoyed a 33% increase in news subscription in the two weeks after the 2016 U.S. Presidential elections and a 20% increase over the rest of the year. Furthermore, around the Brexit vote, The Times reported a 75% increase in news subscriptions (Doctor, 2017b). Dick Tofel, ProPublica president, hypothesized that this bump in subscriptions was a reaction by the public to support journalism as a form of civic action (Doctor, 2017b).

The American Press Institute reported that 77% of 100 U.S. successful newspapers use the paywall model ("Challenges of Monetizing Digital Media," n.d.). However, there is evidence that digital subscriptions are not fully mainstream like print subscriptions were previously. In their Digital News Report 2016, Reuters highlighted that digital news was on the rise but paid news content was struggling, with only 9% of U.S. respondents paying for any online news in the past year (Owen, 2016). The small percentage of consumers currently paying for content could mean one of two things: either there is growth potential in the monetization strategy, or this is indicative of a poor, unscalable monetization model. Are the nine percent of users currently paying for online news representing the early adopters model? If so, the paywall strategy is only seeing initial success – there is a lot of room to grow as consumers get used to the idea of paying for digital news. On the flip side, perhaps the nine percent represent a population of outliers, and will not result in the growth of paid customers for digital news outlets.

Both interpretations of this statistics reveals the present failure of news publishers in serving the society's need for institutional check-and-balance through journalism. Further examining The New York Times provides some context to the digitalized paywall strategy.

Case Study: The New York Times.

       The New York Times (NYT) is an interesting publisher to study because of their multi-faceted digitalization strategy and their commitment to proving the success of the paywall. Founded in 1851, the paper has won the most Pulitzer Prizes (125) than any other newspaper (Victor, 2018). Undoubtedly an industry leader, the NYT is the 2nd ranked newspaper in the U.S. and 17th in the world by circulation. On top of delivering breaking headlines, the NYT has been making the headlines itself. The NYT has been working on the most drastic shift in its strategy thus far – to make digital subscriptions profitable enough to sustain reporters in 174 countries, even when print circulation inevitably stops (Synder, 2017). Beyond evaluating the NYT as a case study for a successful paywall strategy, the NYT is also the embodiment of legacy media adapting their strategy and company to the new digital consumer rather than accepting defeat to the savvier newcomers to the industry.

       Like most legacy newspapers, the NYT has traditionally relied primarily on revenues from advertisements and subscriptions for their print newspaper. In the last two decades, though, the NYT has been making efforts in reducing reliance on revenues tied to physical newspapers. As shown in *Figure 6*, digital advertising revenue only started significantly contributing to the NYT's revenue line in 2010, and digital subscriptions in 2015 (WIRED, 2015). While print revenue still accounts for a majority of the NYT's revenue, the NYT has been focused on bringing in more digital revenue, specifically on revenue from digital subscriptions. Strategically, the NYT will still service its print customers, but invest heavily in funding their digital growth. In 2018, the NYT brought in $709 million in digital revenue – setting them up to exceed their goal of hitting $800 million in digital revenue by 2020 (Benton, 2019). The Times' recent performance has fueled CEO Mark Thompson to set a more ambitious goal for 2025 to reach 10 million subscriptions (Benton, 2019). Additionally, investors are signaling confidence in the NYT with a valuation of $5.38 billion in 2019, compared to its valuation of $2 billion at the end of 2016 (Doctor, 2019).
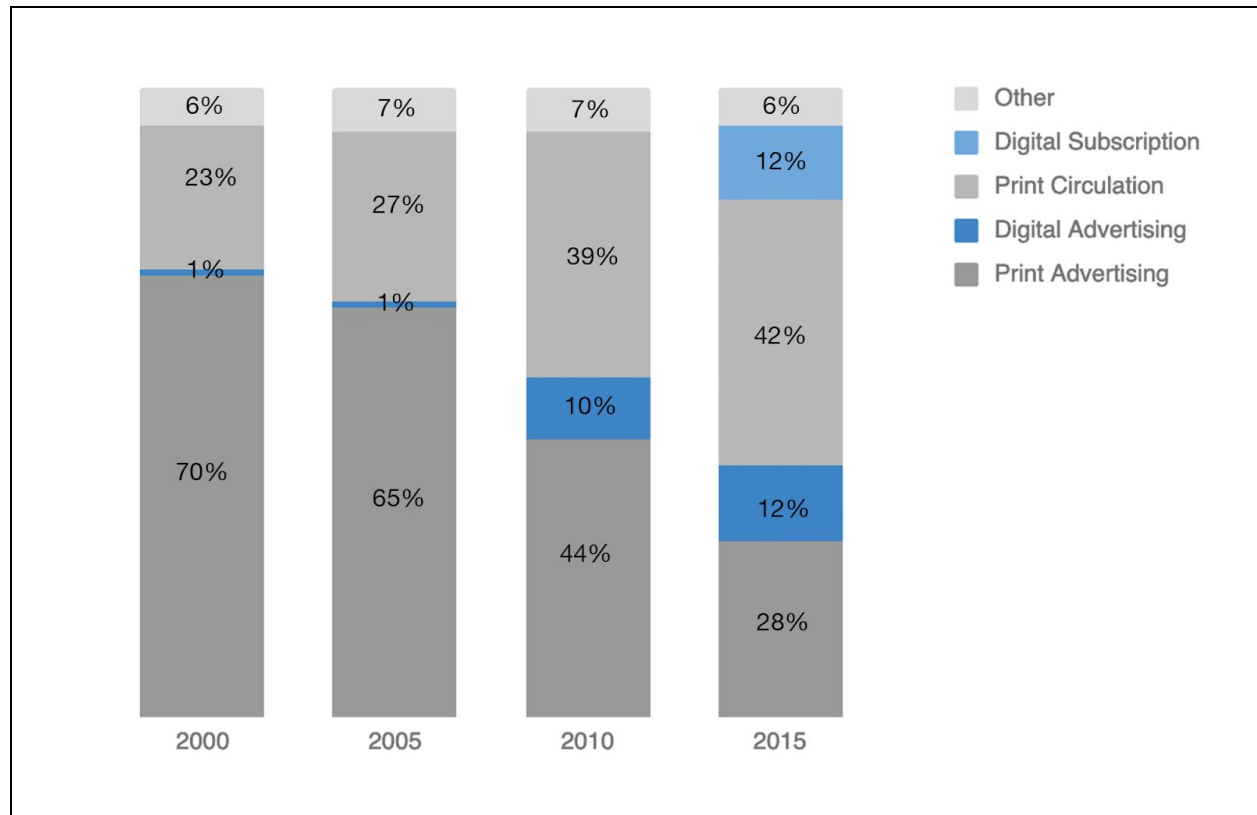
Figure 6. The New York Times shifting its reliance on revenue from print to digital, as seen with the growth in digital advertising and digital subscriptions. Adapted from "The New York Times Claws Its Way Into the Future" by G. Synder, 2017, WIRED. Retrieved from https://www.wired.com/2017/02/new-york-times-digital-journalism/

In recognizing the NYT's success in attracting digital subscribers, it is also worthwhile to note that digital subscribers are still less profitable than traditional print subscribers (Ingram 2015). By implementing a paywall that restricts non-paying users to 5 free articles a month, NYT allows free users to digital content whereas, in the print era, every reader is a paid reader whether through print subscription or from a newsstand. Back in 2015, digital subscribers probably only accounted for $185 million in revenue, which covers the cost of the newsroom. However, the NYT has an annual operating cost of around $1.4 billion because it is more than just a newsroom. So, although the NYT's success with its paywall should be applauded, it is important to note that the shift to digital requires the NYT to broaden their total readership significantly before the NYT can be profitable (Ingram, 2015).

The NYT invested heavily in journalism, their core offering, while exploring other value-added services such as personalized fitness advice and interactive newsbots to attract and retain digital subscribers. The executive editor of the NYT Dean Baquet believes that there are millions of people around the world who want what the NYT has to offer and are willing to pay for it (Synder, 2017). However, the executive vice president for product and technology of the

NYT, Kinsey Wilson, admitted the struggle in convincing consumers to pay for news. Wilson stresses the key to convincing users will be to bundle various services (Synder, 2017). The Times has various products that can be bundled – news, crossword, cooking, parenting. From a distribution point of view, The Times can also stagger the levels of digital subscriptions by providing various device options for users who want to consume content on tablets, smartphones, and desktops. In another display of reader-centricity, the Times' recognizes the diversity in its audiences' interests and content consumption needs by providing various bundling options.

The NYT also skillfully conveyed the rationale behind the Times' strategic adoption of a paywall. The NYT crafted powerful messaging around the importance and cost associated with quality journalism, especially political reporting. Particularly after being called out by President Trump for lacking credibility, the NYT saw overwhelming support from the political left, resulting in a spike in subscriptions. However, the Times recognizes the possibility of a forthcoming "Trump Slump," where readers do not feel compelled to follow news updates as often as they did when Donald Trump was in office (Doctor, 2019). The Times does not want its success to be dependent on political turmoil but recognizes its role in pushing readers to appreciate high-quality reporting. The recognition of the cost of reporting influences readers' willingness to pay, thus making the Times' paywall strategy a success.

The NYT invested in the redesign of their website and launched "The Daily" news podcast as part of its digital business transformation. In 2017, the NYT announced plans to release the most significant redesign in digital history (Doctor, 2017a). The redesign did not have drastic changes from the user's perspective beyond better performance, however, it significantly improved workflow and efficiency in the newsroom. The NYT consolidated its six publishing platforms into one singular responsive publishing system. This digital transformation aims to provide readers with their news needs in various formats on various devices – this pivot from being product-centric to becoming reader-centric is an important strategic shift according to Kinsey Wilson, the Times' editor for innovation and strategy and executive vice president for product and technology (Doctor, 2017a). As part of their strategy to expand the mediums in which their readers can interact with the brand, the NYT launched a daily news podcast that has already enjoyed massive success. The podcast connects with readers through the NYT's ability to deliver emotion, expertise, and engagement. After only nine months of launch, The Daily has already had 100 million downloads with 3.8 million unique visitors, indicating a high potential for The Daily to monetize through advertisements (Doctor, 2017c).

The New York Times pushed for digitalization by prioritizing the user experience of its readers. This reader-centric approach encompassed adopting a paywall strategy, improving The Times' newsroom publishing capabilities, expanding their product bundling options, and launching The Daily podcast to adapt to the various formats readers want to consume news. The

NYT's success in adapting its product and strategy to the evolving needs of digital consumers is the reason why it will continue to be a dominant player in the news industry.

Alternative Monetization Models

Digitalization has opened up numerous other monetization models that publishers can leverage beyond advertising and paywalls. Most publishers do not rely on a single monetization strategy. Instead, some publishers have explored other monetization models that align with their content strategy or niche capabilities, such as affiliate marketing, crowdsourcing, and commercializing in-house software. Lacking digitized predecessors, these alternative monetization models are only viable through leveraging the scale and technology made possible with the Internet. Publishers who adopted these revenue models pioneered some areas of media digitalization by testing out different revenue streams rather than settling for digitized advertising or subscriptions. Again, developing an effective monetization model is a means to an end for publishers to serve users with content.

The affiliate marketing model generates revenue for the publisher from referral links to consumers. Affiliate marketing could range from listing links to advertisers' products in an article, to curating a marketplace of products. Publishers that provide affiliate marketing get a cut from the advertiser for referring an interested customer to the product page. In many ways, affiliate marketing is an extension of digitalized advertising. 90% of participants at the Digital Media Strategies 2018 conference said that eCommerce was the most lucrative monetization model for media companies (IOTechnologies, n.d.). Affiliate marketing is a sound monetization strategy for niched media companies because niche media companies can seamlessly integrate affiliate marketing with their content. For example, Impakter.com is a sustainability publication that publishes status reports on the United Nations' Sustainable Development Goals. In an interview with the founder Michele Bonanno, he shared that he plans to monetize his publication by building a complementary marketplace where the readers of his publication can purchase sustainably produced products. Bonanno believes that affiliate revenue is the only sustainable monetization strategy to fund high-quality journalism in this day and age, so long as the affiliate marketing strategy is aligned with the publisher's brand.

Larger publishers like The New York Times are also employing affiliate marketing as a revenue stream. The New York Times' Wirecutter has driven $20 million in revenue from reader purchases, a 50% increase since the Times acquired Wirecutter (Doctor, 2018a). Wirecutter's largest customer segment comprises of 25 to 34-year-old millennials. Wirecutter is a review website and provides product recommendations for categories from tech gadgets to luggage bags. Wirecutter aims to provide consumers with one single recommendation for each category to mitigate choice paralysis. For example, Wirecutter Money focuses on financial firsts such as navigating student loans, buying a home, and getting married, to complement The New York Times' latest content strategy expansion: Smarter Living. Wirecutter is able to display affiliate product links seamlessly on their website because Wirecutter's content strategy is based on

product recommendations. In comparison, the NYT employing an aggressive affiliate marketing strategy would probably not be as successful, because the links are not aligned with the content strategy of the publication. Wirecutter's success with its affiliate marketing monetization strategy can be attributed to the alignment of the content strategy with the monetization strategy.

While affiliate marketing seems to be a promising revenue source, the strategy is more promising for publishers with lifestyle coverages, because the coverage can be complemented by affiliate marketing links. If a publication is solely dedicated to political coverage or market news, there may be limited products for affiliate marketing opportunities. As publishers diversify their revenue streams, affiliate marketing could be successful with a synergetic content strategy as a form of a digitalized advertising strategy.

Similar to the paywall strategy of relying on end-consumers to fund a publishers' operations, crowdsourcing is another emerging strategy that many radio stations and content creators are relying on. Unlike the paywall strategy, crowdfunded publishers do not restrict non-paying users' access to their content. Instead, they rely on a small group of individuals to donate and fund their operations. Some content creators who rely on crowdfunding reward their donors with special perks. Large household names like The Guardian and NPR have adopted this model, in addition to other streams of revenue. Platforms such as Patreon, Tipeee, Gumroad, and Kickstarter serve as intermediaries for supporters to purchase or donate money to allow content creators to continue making content. The viability of this revenue stream is made possible through the Internet's democratizing effect, enabling content creators to reach their audiences in a more intimate and direct manner than ever before. Crowdfunding can be seen as an alternative, voluntary digitalized paywall strategy, but it may not be sufficient to fully fund quality journalism.

Ultimately, there are numerous possibilities for publishers to monetize their content, readership, and capabilities. A successful monetization strategy should align with the brand and content of the publisher, and help empower publishers to better serve its readership.

Case study: The Washington Post.

While most publishers are likely newsrooms with technology capabilities, not technology companies with reporting capabilities, The Washington Post is generating revenue by selling publishing software to other newsrooms. The Washington Post, also referred to as WaPo or the Post, is a major American daily newspaper with an emphasis on national politics. Debuting its newest slogan "Democracy Dies in Darkness" in 2017, the Post embraces the role of journalism in democracy as the watchdog of the government (Farhi, 2017). However, WaPo was struggling like the rest of the legacy news giants with declining overall revenue and drying advertising revenues in 2012 (Edwards, 2013). In 2013, Amazon founder, chairman, and CEO Jeff Bezos bought The Washington Post for $250 million. Despite WaPo's poor overall financials, Bezos recognized the potential in WaPo's online division – WaPo's online division saw a 5% revenue improvement, compared to the 7% decline in overall revenues in 2012 (Edwards, 2013). In 2016,

The Washington Post became profitable and even added more than five dozen journalists. The Post is going against the current of the industry that is experiencing reductions in newsroom staff (Doctor, 2016b). The Post's traditional revenue streams are also performing well. In 2017, the Post's digital subscriptions doubled and revenue from digital advertising was growing (Nickelsburg, 2018). Bezos attributed the success to a few strategic decisions, including being reader-centric rather than advertiser-centric, investing in high-quality journalism, and developing their technical capabilities (Rosoff, 2017).

Bezos pushed for The Post to build its own publishing software to allow its newsroom to operate more efficiently and obtain deep user insights. The Post's newsroom would be able to report which articles users read, how far users scrolled, which headlines garnered more traffic, and user preferences for content format (Noguchi, 2017). These insights would allow newsrooms to optimize the user experience of their readers based on their content consumption habits and device preferences. Additionally, the improved software enhances the user experience with advertisements by allowing advertisers to target specific user demographics and preferences – similar to the targeted advertisement capabilities of Facebook (Noguchi, 2017). Bezos recognized an industry gap in publishing software designed for large newsrooms and thus pushed WaPo to commercialize the in-house publishing software to other publishers as another form of revenue. WaPo's decision to monetize their software exhibits a unique case in which developing the capabilities to better serve users managed to carry forward synergies to the monetization model.

In 2014, the Post began selling publishing software to news organizations with their software arm, Arc Publishing. Arc provides content management systems built for writers and editors to ensure a reliable experience for readers across devices. Arc also provides advertising and paywall technology to support newsrooms. In 2019, Arc plans to roll out an effective header bidding technology called Zeus to its clients (Doctor, 2018b). Zeus will be able to help publishers increase their cost per thousand (CPM) to advertisers, thereby helping publishers make more advertising revenue by increasing the effectiveness of the advertising. According to the Post's Chief Product and Information Officer, Shailesh Prakash, Zeus has increased the Post's CPM ad rates by 30% by improving the speed, viewability, and optimizing the programmatic bidding of ads (Doctor, 2018b). Within their publishing software, Arc also provides features to enable publishers to monetize their advertisements more effectively.

WaPo seems to be aiming to provide comprehensive software solutions for publishers with Arc. Prakash announced that Arc will launch a paywall product to help customize paywall restrictions (Doctor, 2018b). The paywall product will enable newsrooms to seamlessly adjust their paywall restrictions for different columns, sections, and promotions. Prakash says publishers may want to have a stricter paywall for sports compared to opinion, for example (Doctor, 2018b). Tweaking paywall settings generally requires the collaboration of the in-house engineering team, which often ends up being a manual and slow process. Arc's paywall feature is another example of leveraging the industry knowledge through WaPo to design products

around newsrooms, especially with technological solutions for publishing and monetizing. According to Doctor (2018), Arc Publishing is connecting "the holy trinity of digital publishing: technology that can improve the publishing process, digital advertising optimization, and digital subscription development."

Arc Publishing clients range from the Los Angeles Times to the New Zealand Herald (Eggerton, 2018). Doctor (2018) reported that Arc has over thirty clients publishing on a hundred websites and counting. Publishers are charged based on bandwidth – the more readers there are reading the publication, the more money Arc Publishing makes (McCracken, 2017). Arc Publishing's client fees range from $10,000 to $150,000 per month, depending on the size of the client. The software-as-a-service (SaaS) business model is profitable because subscription fees represent recurring revenue for the Post. The Post is able to diversify its advertising and reader subscriptions revenue with the SaaS revenue for Arc Publishing to boost the profitability of the Post.

The Post's ability to build software that suits its internal needs and then commercialize on the software has bolstered the Post in an era of uncertainty and trouble in the print industry. The unconventional revenue source has been successful in contributing to the Post's bottom line. The Post's technology revenue paired with its growing revenue from digital subscriptions were the main contributors to the Post's ability to expand its editorial team and its ability to continue investing in investigative journalism (Rosoff, 2017). And unlike many other monetization models, commercializing software is one that does not directly relate to the editorial content. However, with Bezos helming the technology vision, the Post has been able to develop the internal technical capabilities to commercialize its software. The Post's success with this alternative way of monetizing is supported by its decision to invest in tech talent. WaPo doubled its IT division to a headcount of 250, which, compared to its 800 journalists, accounts for a good chunk of WaPo's workforce (Noguchi, 2017; Nickelsburg, 2018).

The Washington Post is a great example of a large company that successfully reinvigorated growth by digitalizing its operations to make journalism profitable again. Jarrod Dicker, the Post's director of ad product and engineering, believes that the Post's business turnaround and ability to invest in new businesses like Arc Publishing all goes back to technology (Noguchi, 2017). Fred Ryan, a publisher at the Post, called the Post's newsroom a "laboratory for innovation, capitalizing on the latest advances in storytelling tools" (Nickelsburg, 2018). Challenging industry norms, WaPo commercialized its software to other publishers to gain an alternative revenue stream to fund their reporting efforts. Arc Publishing provided other publishers with software solutions to digitalize their newsrooms. It may seem unstrategic to provide other publishing competitors with the technology to digitalize. By doing so anyway, The Washington Post is able to support not just journalism by WaPo but journalism as an industry, which ultimately has social value. The Washington Post is not thinking selfishly about themselves and proves to truly embody their slogan of "Democracy Dies in Darkness" by helping other newsrooms digitalize and enlighten the world with high-quality journalism.

Conclusion

The modern news industry is faced with the challenge of operating profitably in the face of both misinformation and fierce competition from media platforms. The examples here demonstrate how platforms are digitalizing to combat misinformation and how publishers are digitalizing to fund journalism. The need to balance reporting for both social good and profitability comes down to prioritizing different user needs and being customer-centric. Journalists have to prioritize pursuing meaningful reporting to keep the government and those in power accountable by enlightening the masses, over entertaining society. Pursuing meaningful reporting enables journalism to counteract misinformation and fake news. Readers are increasingly valuing journalism and are willing to pay for digital subscriptions at The New York Times and The Washington Post. Similarly, Wikipedia is more concerned with the credibility of their wikis than simply allowing more people to contribute to wikis. Wikipedia understands the utility of its product primarily lies in the credibility of the information. Wikipedia's ability to crowdsource edits from a massive online community is a means to support that goal, not the other way around. Ultimately, Wikipedia recognizes that wikis serve a societal need for consolidated credible information.

Additionally, the experience of consuming information should be customer-centric to engage users more meaningfully with technology. Publishers should follow in the footsteps of The Outline by designing customer-centric experiences for content consumption. The Outline optimizes for the digital consumer by designing mobile interactions, such as swiping through stories. Companies like The Washington Post and Facebook also have to be customer-centric with their client-facing digital tools. The Washington Post addressed the needs of their newsroom clients for technology solutions to enable their clients to digitalize their advertising and paywall operations.

In conclusion, all modern companies have to make the transition from digitization to digitalization by prioritizing customer-centricity to stay relevant, and better yet, compete against emerging players. Companies have to adapt their value proposition of the product and brand to fit the evolving needs of the digital consumer. Specifically for the news industry, the need to digitalize and be customer-centric has never been more dire, not just for individual publishers, but the entire industry.

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Appendix

Learning Outcomes (LOs)

#digitalization

Recognizes the difference between digitization and digitalization, analyze the implications of digitization or digitalization on a product, company, or industry.

My paper focuses on the distinction between digitization and digitalization. The "The Tension between the Role of News and Monetization" section focuses on the implications of transforming the newspaper from an analog product to a digital one. This section analyzes the implications of digital on the news publishing industry at large including the lowered barrier to entry to publish, the struggle of news publishers to monetize their analog product digitally, the transformation of users from a passive receiver of information to an active distributing agent, and the rise of misinformation as a threat to democracies.

#misinformation

Analyze the phenomenon of misinformation and evaluate initiatives to combat it

I analyzed why the free press is important in democracies and elaborated on the implications of misinformation – I cited examples pertaining to politics but also instances of misinformation enabling human rights violations. The cause of misinformation stems from the implications of digitization where the democratized access to publish and distribute content was increased due to the lower barrier of entry, which saw the rise of user-generated content and social media platforms. Social media platforms do not take a hard stance against misinformation, and will only remove content that exhibits harm onto users, even then, they aren't necessarily effective at doing so, as exhibited by Facebook in Myanmar. Thus, misinformation continues to live and thrive on social media platforms. Sensationalized content that quickly catches the attention of users end up being circulated easily due to the news feed algorithms prioritizing content with high engagement levels.

I discuss policy stances of various technology companies (Google, Facebook, Wikipedia) in attempting to address the growing problem of misinformation. Ultimately, the most effective initiative has been to direct users to Wikipedia as the source of truth. Wikipedia has been successful in maintaining the balance of allowing users to contribute to its wikis while enforcing strict guidelines and policies aimed at ensuring Wikipedia content is neutral and truthful.

#b110-whyexist

Identify why a given company exists and analyze its competitive advantage. Use these insights to evaluate business strategy and execution.

The news publishing industry was created to serve a role in society beyond margins and revenue lines – the fundamental purpose of the media in our society today is to act as a watchdog of the government; to report on atrocities; to curate attention on important matters. In essence, the societal role that news plays is the driving force for discovering solutions to sustain the business of news publishing. However, the role of the press and the need to monetize sometimes is conflicted in a loggerhead because increasingly, there are opportunities to monetize editorial content that might directly conflict with the role of an independent news publisher in the digitalization of the news industry. In my paper, I analyze the manifestation of this clash in incentives that drive the divergence in business strategy.

I analyze the strategy of the Washington Post after Jeff Bezos' acquisition. Bezos is skilled at digitalizing industries, as seen with his success with Amazon in the e-commerce industry. Bezos needed to make the Post profitable to be able to support high-quality journalism to prevent democracy from dying in darkness, the slogan of WaPo. The Post found a new revenue stream – by commercializing their content publishing system as a software offering to other news publishers. The Post's modern day competitive advantage is bolstered by its ability to digitalize by utilizing technology to improve its editorial operations but also to generate an alternative revenue stream for the company.

#b112-socioCulturalStrat
Analyze how social and cultural environments influence business strategy.

In the section on the dominance of platforms, I analyze Google, Facebook, and Wikipedia to understand the different policies and mechanisms implemented by different technology platforms in response to the increased prevalence of misinformation, as well as the societal backlash that pressures the public image of these companies, particularly Google and Facebook. Facebook demotes content that its algorithm deems as less trustworthy, while Google implemented fact-checking features to its search results to minimize instances of false information. As big tech companies expand their geographies, local experts should be consulted to understand the local nuances, be it with the language or means of communicating to identify when and where Facebook or Google's algorithm or mechanisms fails to do its job.

For example, when Facebook expanded to Myanmar, Facebook did not consider that Burmese users were new Internet users and did not take the initiative to educate its new Burmese users on how to behave on the platform – Facebook's code of conduct and user guidelines were not translated to Burmese even after three years of operating in the country. Additionally, Facebook's algorithms to detect hate speech failed to detect hate speech in Burmese because the Burmese language uses a lot of slang and relies heavily on the context to fully decipher the meaning of the language. On top of failing to adapt its algorithm detection to better understand Burmese, Facebook had only one Burmese content moderator that was based in Ireland. Facebook needed local expertise and insight to fully understand the gravitas of the hate speech that festered towards the Rohingya Muslims on their platform. After facing societal backlash

accusing Facebook of being complicit in enabling the genocide against the Rohingya Muslims in Myanmar, Facebook set out a three-pronged strategy to better adapt to the local environment. Facebook planned to expand its team of Burmese-speaking content reviewers, remove accounts that were aggressively spreading hate speech, and introduce localized products for the Burmese market.

#b110-customercentricity
Identify customer needs and explain how their fulfillment leads to better business.

The news industry failed to adapt to evolving consumer needs. Other companies, managed to identify the existing and growing needs of the digital consumer. Google filled the needs of digital consumers to search for information, which is a digitalized need that newspapers used to fill. Previously, newspapers provided a curation of new information to readers. With the introduction of the Internet, users were no longer constrained to the cookie cutter curation of information from newspapers and in fact, had the desire to seek new information. Facebook filled the digitalized need to connect with communities. In the analog era, people kept up to date on events and news going on in their communities through local newspapers and local radio stations. Facebook extended the ability to connect to communities, unrestricted by geographic location, with the Internet.

Both Facebook and Google managed to monetize off users desire for relevant advertisement. It is not that users dislike advertisement, but that users dislike irrelevant advertisement. Facebook developed targeted advertising to enable advertisers to target users based on demographics and interests, while Google enables advertisers to target users based on search queries. Facebook and Google's dominance as large technology businesses can be distilled down to their ability to meet users' and advertisers' need for targeted advertising.

#b144-competitiveproductvalue
Evaluate product feasibility and competitiveness

Wikipedia is able to grow rapidly, and most importantly, self-regulate, because Wikipedia has essentially mastered the ability to crowdsource quality information because of its policies but also because of its function. As a product, Wikipedia is another consumer-facing platform that democratizes access to publish. But it does so by also requiring the published information to be accurate. Unlike Facebook that serves as a social platform, Wikipedia is a free encyclopedia. It is impressive that Wikipedia, being openly editable, has achieved the reputation of highly reliable and accurate. Wikipedia does not just give access to users to edit or contribute to a wiki, users are also by large the editors that crowd-edit. Wikipedia interferes using sophisticated algorithms to detect when a wiki has been "vandalized" so that the wiki can immediately be repaired either to its original state or further edits, which need to go through the whole editing process again. As an Internet company, Wikipedia is perhaps one of the most effective at preventing misinformation, compared to the likes of Google and Facebook.

Wikipedia is perhaps proof against the notion that misinformation persists on all Internet products. Wikipedia is first and foremost a digital encyclopedia; thus its purpose is to serve as a reference of information. Other tech companies like YouTube and Facebook are using Wikipedia as the source of truth as the other tech companies attempt to combat misinformation. In the Internet industry, Wikipedia's competitive advantage in fighting misinformation is directly related to its core function: to provide comprehensive and accurate information.

#b113-advantage

Design and evaluate initiatives that would gain a competitive, strategic advantage

In all my case studies, I evaluate various initiatives that enable brands to gain a competitive and strategic advantage by ensuring the brand serves a customer need. Facebook's competitive advantage is its ability to serve content users want to see and already disagree with, also known as the filter bubble and Facebook's stance on upholding free speech. Facebook justifies its stance on promoting and demoting posts instead of blatantly deleting clickbait and inaccurate content hosted on Facebook because Facebook distinguishes its purpose: Facebook is a platform, not a publication. Thus, as a platform, Facebook's role is not to curate but only to host content. Facebook's ability to satisfy users who want to freely express themselves by not removing or blocking content; Facebook's PR section on the Big Questions where VP of Policy addresses principles in moderating a public forum satisfies users who believe in free speech but are concerned about dangerous content; Facebook's ability to find solutions that do not silence users while being able to keep users dependent on their platform, is truly what is keeping the platform highly competitive.

#b111-bizstrategy

Formulate and analyze business strategy.

The Outline was created on the foundations of a digital-first strategy. The Outline utilizes highly effective web design capabilities to design their website, highly optimized for mobile. Similarly, The Outline was very adamant about the not-death of digital advertising – especially when done with a digital-first foundation and proficient design capabilities. The Outline is selective with the advertisers it works with and creates engaging advertisements for audiences to interact with – for example, The Outline once built an interactive driving game for Cadillac. The Outline boasts 25 times higher click-through-rates and 13 times higher engagement rates – this results in the publisher to be able to secure six-figure advertising deals. The Outline's digital-first strategy is what built the business' capabilities in rethinking the status quo of advertising and thus be a success story for digital advertising in an era of drying digital ad spend.

#b144-productmarketfit

Analyze product/market fit

Google is the most dominant modern day search engine with 90% of market share, even though Google was not the first Internet search engine. In the Google case study, I identify the product features that differentiated Google from its competitors – ranking the credibility of each web page based on how many other web pages it has been linked to, also known as backlinking. Backlinking turned out to be a more effective way of sorting through and ranking search results, compared to other search engines at the time which were ranking based on keywords. Google met the market demand of users trying to find relevant and credible search results. Through backlinking, Google managed to increase the relevance and credibility of search results, which met the market demand of users of discovering information that answered their question and was verified. Google achieved product market fit with its search engine filling the digital consumer's desire to seek for relevant and credible answers.

Google took a similar philosophy of rethinking paid search advertising by prioritizing the relevance of an advertisement in relation to a search query, over how much the advertiser paid for an advertisement. By introducing the Quality Score Model, Google managed to increase the relevance of advertisements that users were seeing based the search query of users. By targeting relevant and interested customers, advertisers saw a boost in advertisement effectiveness. Advertisers also enjoyed only paying Google when a user clicked on their advertisement, through the pay-per-click model. The pay-per-click model incentivizes Google to serve the most relevant advertisement to the most interested users. The alignment of incentives represents the alignment of the product with the market needs.

Habits of Mind and Foundational Concepts (HCs)

#breakitdown (foregrounded)

Organize problems into tractable components and design solutions.

In recognizing that the implications of digitization and the movement towards digitalization have distilled its effects in two manifestations, misinformation and the struggle for publishers to monetize, I broke down my analysis into its main components to understand the problem holistically. I start with understanding the main change in the media landscape over the past 20 years: digital. I analyze the role that news plays in democratic societies, and as a result of the rise of the internet, digitization has paved the way for misinformation to thrive on non-publisher platforms in addition to making it difficult for publishers to monetize.

After identifying the components of the problem, I wanted to visit each component based on the primary agent involved. For misinformation, I recognized that platforms were largely to blame and involved in the issue. I analyzed the problem of misinformation on three major, yet distinct, platforms: Google, Facebook, and Wikipedia. Next, the struggle to monetize primarily

affects the operations of publishers. I decided to break down the various monetization models to understand how they have evolved and then explore how specific publishers are digitalizing their monetization models.

#gapanalysis (foregrounded)
Identify and evaluate whether there are suitable existing solutions to a problem or whether a creative new solution is required.

My interest in the media industry piqued because I was initially curious about the existence of an alternative monetization model for news publishers beyond advertising and paywalls. To understand if there was a gap in the pool of solutions, I had to first investigate the various monetization models of publishers. My research brought to light many forms of monetization models with varying degrees of success depending on the company. Investigating the existing solutions prompted me to look for a complete alternative model. There may be interesting alternative revenue streams such as selling software the Washington Post but my research has found that there is no one prescription for a monetization model that can be applied to all publishers in the industry because every publisher has different audiences, brands, capabilities, and operations.

Through my research, I discovered the issue to be larger than publisher's inability to monetize. Publishers were struggling with reaching its audiences because platforms were able to connect to users in a digital way that publishers failed to do. As a result, platforms emerged as competitors to publishers. While platforms managed to captivate users, platforms were struggling with the emerging problem of misinformation. However, unlike news publishers, platforms did not have a societal obligation to the truth; platforms were not the watchdog of the government or society; platforms existed to mediate digital interactions. For example, after facing backlash for being complicit in enabling atrocities like the Rohingya genocide in Myanmar, Facebook had to own up to the responsibility to operate ethically. Like the solution for publishers to monetize, there is no one solution for platforms to operate ethically. For Facebook, operating ethically means localizing responsibly when entering a new market. For Wikipedia, operating ethically means tightening up regulations and policies around editing to uphold the credibility of wikis.

#rightproblem
Characterize the nature of the problem.

I identified the root problem of the news industry's struggle to monetize to boil down to the failure to digitalize the value proposition and product of news. The failure to digitalize stems from the misconception that the product is the content – the product is actually the curation of content; the product is connecting local communities; the product is acting as an accountability mechanism to those in power, for the masses. Content was the medium to deliver the value propositions, not the value proposition itself.

The initial state of news is the digitization of content, whereas the goal state is to digitalize the value propositions of news publishers to serve the various needs of users. If the news industry fails to digitalize its value propositions to address the needs of a digital reader, the entire industry could cease to exist due to the inability to monetize.

#levelsofanalysis

Describe interactions among events or characteristics of a system at different levels of analysis to generate explanations of phenomena.

Throughout my paper, I analyzed the various user needs that news publishers fulfill. First, I outlined the societal level need for news as a vital component of democracies in reporting on updates that are of regional, national, or global interest. On a societal level, the free press act as an accountability measure for people in power such as politicians and businessmen. On an individual level, the desire to engage in local communities was addressed by the analog success of local newspapers and the digital success of Facebook. Additionally, users have the desire to consume knowledge and engage in ideas through editorial content. From a branding perspective, news publishers also addressed the user need to associate with a brand identity, as seen with the success of the WSJ+ events and the New Yorker tote bag that also fills the need of social signaling. News publishers should prioritize which user need is best suited for the brand and its audience.

#constraints

Identify and apply constraint satisfaction as a way to solve problems.

Most monetization models focus on the content because the publisher's core competency is creating content that sells copies of a newspaper, sells ads, sells digital subscriptions, sells a brand's story or product. However, focusing on commercializing the content is a mere industry norm and obstacle, not an actual constraint. The constraint that exists is not that publishers cannot develop the capabilities to develop a technology product, like the Washington Post, but the constraint industry-wide is that most publishers are struggling to make the financial investment to develop further capabilities that will help them monetize, in addition to needing to finance the production of high-quality content. The finance of the business is something that cannot be overcome but has the potential to be minimized, perhaps through innovating the operations of journalism.

By contrast, the evolving landscape of content distribution with the rise of social media platforms and news aggregators, as well as the ineffectiveness of traditional digital advertising, these are obstacles and challenges to the industry. There have been cases of companies in the industry that are overcoming these obstacles and able to be profitable despite facing the same challenges as the rest of the industry. These examples include the New York Times monetizing through Wirecutter and The Washington Post monetizing through their Arc Publishing software.

#multiplecauses

Identify ways that multiple causes interact to produce complex effects.

      The industry-wide struggle to monetize and combat misinformation in news is a result of multiple causes that stemmed from digitization – these causes interact with one another and create reinforcing feedback loops that further fuel the struggle to monetize and allow misinformation to thrive. The lower barrier to entry to publishing creates an abundance of free content that threatens legacy publishers to stay competitive, and thus monetize. More importantly, the lower barrier to entry results in free content full of potentially false information or sensationalized versions of the truth to captivate the attention of users. From this, misinformation plagues the internet and makes it difficult for users to identify verified information.

      Additionally, the rise of third-party platforms as the overtaking news distribution channels is reducing publishers' ability to commercialize their distribution channels, be it digital or print subscriptions. Some third-party platforms that do not claim to be media platforms and thus do not claim responsibility for having to fight misinformation. For example, when Facebook identifies or deems content to be not credible, Facebook's algorithm demotes the post in their news feed algorithm but does not delete the content. Facebook's algorithm prioritizes what they think users want to see, which often cases could include half-truth contents that are sensationalized due to the spike in engagement with clickbait or sensationalized content. The responsibility for promoting healthy information consumption is often times lost when content is hosted on social media platforms due to the misalignment of incentives and purpose. Going back to the lowered barrier to entry, this essentially creates a system that enables misinformation to live, and in sensationalized or clickbait content's case, thrive on social media feeds. In the sea of content, legacy media struggle to monetize because legacy media struggle with the virality of online content because it contradicts with the values of journalism. In essence, the implications of digitization have allowed misinformation to thrive and thus legacy media companies to struggle to monetize.

#powerdynamics

Recognize how to influence group interactions by exerting different types of power.

      The present-day power dynamics between platforms and publishers can be originated to platforms stripping publishers away from their revenue streams and relationships with users. Platforms now hold the power of relationships with consumers due to high user dependency and usage on the platform, contributing to Facebook's position of power to content creators. In any negotiation scenario where content creators try to get a higher advertising cut, Facebook leverages its advantageous position because Facebook knows it can work with an abundance of advertisers or content creators. On the flip side, advertisers or content creators have limited options when it comes to working with platforms that reach a massive audience as large as the

one that Facebook has amassed. Facebook derives power and influence from the abundant supply of content creators who want to work with Facebook.

Facebook is able to influence its network of publishers. Facebook released false statistics overreporting the effectiveness of video content in order to incentivize content creators to aggressively pursue video content strategy. In my section analysis on "Platform Dominance," I analyze how industry-wide moves were made after Facebook released that data towards pursuing a video-centric content strategy – this resulted in job losses and heavy investments in developing video technology. All these business moves were done on a false basis – Facebook was able to not only pull that off but when word got out that Facebook released false statistics, there was minimal backlash or implications on Facebook. These instances prove the great amount of power and influence Facebook has in dealing with publishers. Ultimately, the power platforms over content creators stem from the failure of the news media industry to digitalize.

#biasidentification
Identify and explain how biases result from psychological mechanisms or use of heuristics.

The "Echo Chambers, Filter Bubbles, and Fake News" subsection attributed the phenomenon of echo chambers to the widespread tendencies of people to be susceptible to confirmation bias. Also known as selective exposure theory, confirmation bias is problematic at scale because people do not seek contradictory information and thus do not challenge their viewpoint. Often, this means that people hold beliefs without consider the other side of the argument or belief. It is important to understand the rationale behind the other side of the argument to empathize with people who hold that belief. Failure to do so would result in demonizing an entire group of people for their beliefs, even if their beliefs stem from best intent. As a result, confirmation bias facilitates dividing people with different beliefs.

When technology is introduced, confirmation bias gets amplified by algorithms of news feeds and the ability to follow pages and users with similar beliefs. Due to the decentralized nature of the Internet, more people are able to connect on niche beliefs and issues, preventing the questioning of problematic viewpoints and in most cases, enforcing it. Confirmation bias is enhanced by filter bubbles, which are algorithms created by platforms to tailor to users but in turn hide contradicting content. Groups of people create echo chambers by reinforcing existing ideas and beliefs, which get enhanced with the scale of the Internet.

#context
Situate a work in its relevant context (e.g., historical, disciplinary, cultural).

In the Facebook case study, I analyzed Facebook's negligence in Myanmar. I provide relevant background on Burmese people having a lack of exposure to the Internet before Facebook. In understanding that Burmese users were not just new Facebook users, but new Internet users, was a crucial context to understand why Facebook could have done more in Myanmar to educate its users. Facebook has been involved in shaping the way digital users

interact with one another and the platform for nearly a decade before entering Myanmar. Facebook needed to recognize the need for user education, and should not have begun operating in the country until they translated their terms of use and user guidelines.

Additionally, providing the context that Facebook entered the Burmese market through its Internet.org initiative, which is framed and publicized as a do-gooder project, makes Facebook's negligence even worse. Not only did Facebook fail to do good in Myanmar, but Facebook also enabled hate speech to spread on their platform towards Rohingya Muslims by Buddhist extremists and the Burmese military. Providing the context of the motivation behind Facebook expanding to Myanmar in the first place situates the severity of negligence and harm inflicted to the Burmese society.

#cognitivepersuasion

Recognize and use appropriate cognitive tools to persuade.

The New York Times and Wikipedia crafted narratives that were persuasive to their audiences to convince them to pay or donate. Storytelling is an effective cognitive persuasion technique because it walks readers through the rationale of why NYT or Wikipedia need their money. The New York Times conveyed the cost required to produce high-quality reporting so users understand The Times' rationale behind implementing a paywall. Readers are prompted to consider the costs associated with producing the content they just enjoyed and internalize that just as users pay for physical products they value, they should pay for content they value.

Wikipedia persuades users to donate by telling the story of Wikipedia – that Wikipedia is run by the non-profit Wikimedia, that Wikipedia does not run ads to monetize, that Wikipedia does not take government loans. Wikipedia found that their plain yellow text explaining the Wikipedia story is more effective in getting donations than Jimmy Wales, founder and CEO, asking users to donate. The text-only banner call for donations is likely more successful because it allows users to connect with the story of Wikipedia which reflects Wikipedia's values and purpose. In comparison, the face and voice of Jimmy Wales may not be recognizable to every user and perhaps a CEO of a successful technology website does not motivate people to donate. Beyond telling the Wikipedia story, Wikipedia also anchors the user by sharing that the average donation is $30, but Wikipedia only needs $5 from the user. Wikipedia also shows individual users that they can have an impact even by just donating $5 because "if everyone reading this gave $5, our fundraiser would be done within an hour." Wikipedia uses cognitive tools such as anchoring users to thinking that $5 is a low value and that even donating that would help.

#biasmitigation

Identify methods to mitigate the effect of biases and determine when it is appropriate to do so.

Wikipedia strives to be a comprehensive and neutral online database. To achieve that, Wikipedia has developed bias mitigation mechanisms to ensure its crowdsourced contributors edit and contribute in a neutral manner. Neutrality is especially difficult to produce because

everyone has biases that will inevitably creep in when editing or contributing to a wiki. To mitigate bias and maintain neutrality, Wikipedia establishes mechanisms for contributors to abide by library science and intellectual property principles. Wikipedia has strict guidelines to edit, review and approve changes to enforce neutral editing behavior. For an edit to be successfully published, the edit has to cite high-quality sources and pass the review process by trained editors and bots that patrol recent edits. By enforcing deliberate rules, Wikipedia has ensured its contributors avoid, reduce, and correct for their psychological biases to participate in the Wikipedia editing process.

Wikipedia relies on user donations and does not monetize through advertising because it goes against Wikipedia's brand purpose of being neutral. Additionally, Wikipedia bans paid editing wikis because paid editing incentivizes biased editing which directly clashes with Wikipedia's principle of being neutral. By removing incentives to enable biased opinions on their website, Wikipedia is able to maintain the neutrality of its wikis by disincentivizing biased contributions.

#purpose
Identify and evaluate underlying goals and the values on which they are based, as well as the guiding principles that determine how an individual or group will try to attain these goals.

With their "Democracy Dies in Darkness" slogan, the Washington Post extends its purpose beyond funding high-quality journalism in-house, to empowering other news outlets to digitalize through providing software. Instead of keeping their publishing software proprietary as a competitive advantage, the Washington Post is purpose-first in supporting reporting at other newsrooms to ultimately prevent democracy from dying in darkness. By providing technology solutions for newsrooms to digitalize their advertising efforts and paywall implementation, the Washington Post is investing in helping the news industry as a whole remain competitive against competitors in the attention economy, platforms. Arc Publishing is more than an intelligent and alternative monetization model, Arc Publishing is also aligned with WaPo's slogan that stands to support reporting as a fundamental component of democracy.