

Coverage of Social Media and Technology in Print Journalism

Thematic analysis of social media and technology
in print news outlets

PREPARED FOR:

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EXECUTIVE SUMMARY

Research Overview

Objective: To measure representations of social media platforms and Big Tech in newspapers across three western media markets: United States (US), United Kingdom (UK) and France.

Research Questions:

- Is Big Tech framed in a positive or negative way in news articles?
- What are the main themes through which Big Tech is discussed in news articles?
- What are the types, causes of, and solutions to harms related to Big Tech, as portrayed in news articles?

To address these research questions, the USC Norman Lear Center's Media Impact Project (MIP) — with support from Luminate Strategic Initiatives — conducted a thematic content analysis of 150 news articles from 15 newspapers.

Methods

In collaboration with Luminate, NLC identified fifteen popular newspapers from the US, UK, and France that offered diverse political viewpoints.

Using Google's "site:" operator, we searched each newspaper for articles that mentioned these key terms (and their French equivalents): "social media," "platform," and "Big Tech."



site:wsj.com "Social media" "Platforms" "Big Tech"

We then selected the 10 articles displayed first in each search to include the most relevant and timely articles from each periodical.

Methods

The resulting sample consisted of 150 articles total, 50 from each country, 10 from each newspaper.

Each article was then subjected to inductive thematic analysis, in which the primary focus of each article was coded.

Each article was also coded for any brief mentions of topics related to social media, as well as demographic characteristics of quoted sources. SPSS was then used to measure the presence of intersections among key topics of interest.

Articles were subjected to additional linguistic calculations using LIWC, a language analysis program that can measure tone and presence of key terms in a text.

Key Findings

- Most articles were focused on harms caused by social media or Big Tech companies.
- Very few articles included any personal stories.
- Around two thirds of articles mentioned a key source of harm, such as Big Tech's profit motive or algorithms.
- Most articles mentioned legislation or government regulation as a possible solution to a Big Tech problem.

Recommendations for Journalists

- **Tell** personal stories that engage and connect with audiences.
- **Name** monopolistic corporations and their algorithms as key sources of social-media-related harms.
- **Highlight** legislation or government regulation as a potential solution to social-media-related harms.
- **Demonstrate** ordinary people organizing and working together to bring about social change.



DETAILED FINDINGS

Most articles framed social media in a negative way:

- 90% of articles primarily discussed **social harms** related to social media
 - The tone of articles was significantly more negative than the average NYT science article (22.5 vs. 37.1).*
- 10% of articles used a more neutral or economic frame:
 - "Big Tech Is Getting Clobbered on Wall Street" (New York Times)
 - "Google, Facebook, Amazon, Apple and Microsoft. Call Them Tech Frenemies for Life" (Wall Street Journal)
 - "Why Facebook has become the weak link in GAFAM" (Le Figaro)

*These numbers were calculated using linguistic software LIWC's dictionary of terms related to positive and negative tone. The average NYT score was calculated by Boyd et al (2020) using a sample of 18,312 New York Times science articles published between 1989 and 2017.

Most articles did not quote a Big Tech spokesperson, suggesting a possible lack of pro-tech bias:

- 31% of articles quoted at least one Big Tech representative
- 67% of articles quoted at least one non-tech authoritative source*
- Demographics of non-tech authoritative sources:
 - 70% were men, 30% were women
 - 84% were White, 16% were POC
 - 23% work in academia
 - 46% work in government
 - 15% work in the nonprofit sector
 - 16% work in the private sector

*"Non-tech authoritative source" refers to any explicitly named person who is cited in an article, presented as an expert with reliable knowledge on the article's topic, and does not belong to or speak on behalf of any Big Tech organization (i.e. university professors who have subject matter expertise).

However, only 5% of articles included at least one personal story from a regular person who was affected by Big Tech in a negative way:

“‘The algorithms that drive Instagram and TikTok nearly killed my daughter Mariam. Curious about healthy eating, social media sucked her into a black hole of dangerous content like how to eat less than 500 cals a day or challenges to prove extreme thinness,’ Neveen Radwan, mother of Mariam wrote.” – USA Today, 2024

Including personal stories in reporting can help engage readers and draw attention to social harms (Van Valkenburgh et al., 2022).

While the overwhelming majority of articles had a negative framing, a plurality of articles were not focused on any specific problem:

- 18% focused on various problems as the main article topic

For example: "Studies have linked social media platforms to mental health crises, child exploitation, cyberbullying, body image issues, polarization, social division and the spread of misinformation."

- 11% focused on "censorship" of conservative voices
- 9% focused on child safety
- 9% focused on privacy concerns
- 9% focused on content moderation/censorship
- 8% focused on political disinformation
- 7% focused on compensating news outlets for content
- 7% focused on breaking up monopolies

Focus of Articles

12% of articles were focused on “other” harms that were not easily classified into the above categories, including:

- The creation of echo chambers
- National security concerns
- Labor issues at social media companies
- Copyright infringement issues
- Technical difficulties in the rollout of a government-funded culture app

Focus of Articles

Compared to other countries, French newspapers had few articles focused on “censorship,” child safety, and newspaper compensation

	US (50)	UK (50)	FRANCE (50)
Various problems	22%	14%	18%
“Censorship” of conservatives*	10%	22%	0%
Child safety	14%	10%	2%
Privacy concerns*	6%	2%	18%
Content moderation/censorship	4%	12%	10%
Disinformation/elections	6%	12%	6%
Compensating news outlets	12%	8%	2%
Breaking up monopolies	10%	6%	4%
Other problems	6%	12%	22%
Descriptive/non-problem*	10%	2%	18%

*Statistically significant in a Pearson Chi Square test ($p < .05$).

A focus on political disinformation was significantly more common in left-leaning news outlets

	LEFT (80)	RIGHT (70)
Various problems	18%	19%
“Censorship” of conservatives	14%	14%
Child safety	9%	9%
Privacy concerns	9%	9%
Content moderation/censorship	5%	13%
Disinformation/elections*	13%	3%
Compensating news outlets*	11%	3%
Breaking up monopolies	6%	7%
Other problems	16%	10%
Descriptive/non-problem	6%	14%

*Statistically significant in a Pearson Chi Square test ($p < .05$).

Beyond the overall topic of each article, articles *mentioned* the following issues:

- Privacy concerns (35%)
- Misinformation (30%)
- Censorship (30%)
- Disinformation (27%)
- Hate speech (24%)
- Targeted advertising (22%)
- AI technology (19%)
- 2020 U.S. election (19%)
- Elon Musk (18%)
- Threats to democracy (17%)
- Innovation (15%)
- Conspiracy theories (13%)

A partial list of relatively infrequently mentioned topics:

- 9% of articles mentioned mental health
- 7% of articles mentioned suicide
- 5% of articles mentioned climate change
- 5% of articles mentioned bullying
- 3% of articles mentioned transgender-related issues

67% of articles mentioned at least one of the following key sources of harm caused by tech companies:

- Profit motive (35%)
- Algorithms (33%)
- Monopoly power (28%)
- Lobbying tactics (11%)
- NetChoice (5%)*
- “Big tobacco” denial tactics (3%)

These data suggest that criticism of social media in print media may be focused more on economic roots of harm, more than political tactics.

*NetChoice is a conservative-leaning trade association and lobbying group that advocates on behalf of Big Tech companies for internet deregulation

60% of articles mentioned legislation or government regulation as a possible solution

Specific legislation included:

- 14% Antitrust legislation
- 11% Digital Services Act
- 8% Digital Markets Act
- 4% Kids Online Safety Act

Thus, articles largely framed these problems as *systemic*, insofar as they mentioned systemic government regulation as a proposed solution.

Other proposed solutions included:

- De-regulation (*The Sun*)



Trump wants lower regulatory burdens for economic growth, protect free speech from AI-powered censorship, and secure America's leadership in AI for national security

Lisa Palmer, AI Analyst

- New tech tools like the Unfollow Everything app (*New York Times*)

Ethan Zuckerman, a public policy professor at the University of Massachusetts Amherst, has asked a federal court to pre-emptively declare that a little-used part of Section 230 allows him to release software that lets users automatically unfollow everyone on Facebook. Arden Wray for The New York Times

- Unionization as a solution for monopoly-related problems (*The Guardian*)

The drive for profit is behind many of the ills of Google, Facebook et al. Unions and public ownership are the only way to solve this

In addition to measuring how often articles mentioned relevant topics, we measured intersections among themes of interest across all articles.

The topic of **targeted advertising** was significantly* associated with these other topics:

- Legislation
- Profit motive
- Algorithms
- Monopolies
- Privacy concerns

*In a Pearson Chi Square test ($p < .05$). It was marginally associated ($p < .10$) with misinformation, the 2020 U.S. election, and free speech.

In addition to measuring how often articles mentioned relevant themes, we measured intersections among themes of interest across all articles.

The topic of **misinformation** was significantly* associated with these other topics:

- Algorithms
- Disinformation
- Free speech
- Hate speech
- Violence
- 2020 U.S. election
- **"Conservative censorship"**
- Conspiracy theories
- **Polarization**
- Propaganda
- **Terrorism**

*In a Pearson Chi Square test ($p < .05$). It was marginally associated ($p < .10$) with profit motives, Covid, and targeted advertising.

In addition to measuring how often articles mentioned relevant themes, we measured intersections among themes of interest across all articles.

The topic of **disinformation** was significantly* associated with these other topics:

- Algorithms
- Misinformation
- Free speech
- Hate speech
- Violence
- 2020 U.S. election
- **Democracy**
- Conspiracy theories
- Polarization
- Propaganda
- **Covid**
- **Foreign influence**

*In a Pearson Chi Square test ($p < .05$). It was marginally associated ($p < .10$) with "conservative censorship," racism, and mental health.



APPENDICES

Appendix

Sampling Procedure

Sampling procedure

In collaboration with Luminate, we identified five popular newspapers from each of three countries (U.S., U.K., France) that represented diverse political perspectives:

U.S.

1. The Wall Street Journal*
2. The New York Times
3. USA Today
4. The Washington Post
5. Los Angeles Times

U.K.

1. The Sun*
2. Daily Mail*
3. The Sun on Sunday*
4. The Guardian
5. The Observer

France

1. Le Figaro*
2. Le Monde
3. Libération
4. Ouest France*
5. Le Parisien*

*Periodicals with and asterisk were designated as politically conservative/right-leaning, while all others were treated as liberal/left-leaning. These designations are consistent with those made by the Ad Fontes Media Bias Chart (see <https://guides.library.harvard.edu/newsleans/thechart> for more information). Our search method was unable to distinguish between articles from the Sun and The Sun on Sunday, as well as between The Guardian and The Observer. We therefore included twenty articles from The Sun and twenty articles from The Guardian.

Appendix

Sampling Procedure

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- Using Google's "site:" operator, we then searched each newspaper for articles that mentioned these key terms (and their French equivalents): "social media," "platform," and "Big Tech."
- We then selected the 10 articles displayed first in each search to include the most relevant and timely articles from each periodical.
- This resulted in a sample of 150 articles, total (10 articles from each of 15 newspapers).

Appendix

Coding Procedure

Coding procedure

- These 150 articles were then subjected to human-coded thematic analysis for emerging themes and content relevant to Big Tech and social media.
- Because most of these themes were coded inductively, they were not subjected to double-coding or reliability analysis—which commonly pertains to previously defined categories, rather than categories that emerge within the coding process itself.

Appendix

Coding Procedure

Coding procedure

- The tone of these articles (negative vs. positive sentiment) was then measured using linguistic analysis software LIWC, as was the frequency of key terms in each article.
- The LIWC software was designed to measure emotional sentiment and other linguistic features of a text by calculating the percentage of words in a text that belong to pre-established or user-generated “dictionaries.”*
- Dictionary scores for a text can then be compared with scores of pre-established samples, such as a body of over 18,000 New York Times science articles.

*An LIWC dictionary is defined as “a map that connects important psychosocial constructs and theories with words, phrases, and other linguistic constructions.” (Boyd et al., 2022).

Appendix

Codebook

Codebook

ITEM LABEL	ITEM DESCRIPTION
PROBLEM	Does this article primarily focus on problems associated with Big Tech or social media platforms?
TONE	What is the tone of this article? (LIWC)
TECH	Does this article quote as least one representative of a Big Tech company (or the tech industry more broadly)?
NON-TECH	How many explicitly named non-tech experts or authoritative sources are quoted in this article?
GENDER	What is the gender identity of each non-tech expert quoted in this article?
RACE	What is the race of each non-tech expert quoted in this article?
PROFESSION	What is the professional field of each non-tech expert quoted in this article?
PERSONAL	Does this article include a personal story from at least one “ordinary” person (i.e. non-authoritative source)?
MAIN	What is the main topic of this article?
MENTIONS	What themes related to Big Tech or social media are <i>mentioned</i> in this article?
CAUSES	What (if any) key sources of harm related to Big Tech or social media are mentioned in this article?
SOLUTIONS	What (if any) solutions to harm related to Big Tech or social media are mentioned in this article?

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