Pew Research Center

As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups

About three-quarters (74%) of public posts about COVID-19 linked to news organizations, while just 1% linked to health and science sites

BY *Galen Stocking, Katerina Eva Matsa and Maya Khuzam*

About Pew Research Center

Pew Research Center is a nonpartisan fact tank that informs the public about the issues, attitudes and trends shaping the world. It does not take policy positions. The Center conducts public opinion polling, demographic research, content analysis and other data-driven social science research. It studies U.S. politics and policy; journalism and media; internet, science and technology; religion and public life; Hispanic trends; global attitudes and trends; and U.S. social and demographic trends. All of the Center's reports are available at www.pewresearch.org. Pew Research Center is a subsidiary of The Pew Charitable Trusts, its primary funder.

Terminology

This study explored the public spaces (public pages and groups) on Facebook where English-language discussion of COVID-19 occurred during March 2020, as well as the sources Facebook users linked to when posting in these spaces. Taken together, this gives a sense of how widely COVID-19 was discussed as well as the kind of sources users turned to for information about the outbreak. Here are some definitions of key terms used throughout this report:

Public spaces: These are defined in this study as the Facebook pages and groups where posts are public (Facebook distinguishes between pages and groups, but they were combined here). The study analyzed English-language posts about COVID-19 in the 3,000 public spaces (1,500 pages and 1,500 groups) whose coronavirus-related posts with links received the most engagement, on average. Public spaces were coded for their **subject orientation** and their **geographic focus**.

Public spaces *subject orientation*: The different types of public spaces are determined by the main topic the public space is oriented around. Researchers manually categorized public Facebook spaces into 10 categories based on their title and "about" section: 1) personal interest and lifestyle; 2) entertainment and sports; 3) government and politics; 4) religion; 5) general news; 6) business and public figures; 7) foreign; 8) nonprofit and research; 9) humor; and 10) health care and science. For example, a public space called "Informed Parents of California" was classified as personal interest and lifestyle.

Public spaces *geographic focus*: This indicates whether a public space explicitly referenced a local city, town, neighborhood or state in the U.S.; a foreign country or area; or did not have a geographic focus, including those about the U.S. generally. For instance, the "Informed Parents of California" space had a local focus.

Public posts: These are the English-language coronavirus-related posts with links in the 3,000 public spaces analyzed. Coronavirus-related posts are those that match a set of coronavirus-related keywords ("coronavirus," "covid-19," "covid" or "corona virus"). This research identified about 6.5 million Facebook posts published during March 2020 (including those that did not share a link), but the main analysis focused on the 93,091 posts with links about COVID-19 from the 3,000 public spaces, based on the average number of interactions their coronavirus-related posts with a link received.

Interactions: These are the total number of comments, shares, likes and other reactions to these posts. The average coronavirus-related post with a link in this study had 2,713 total interactions.

Sources: These are the websites (e.g. pewresearch.org) that are linked to in these posts (referred to both as sources and sites). The 93,091 Facebook posts analyzed in this study linked collectively to 4,860 distinct websites across the 3,000 public spaces. Sources are coded by **source type**.

Source type: This describes the different types of websites found at the destination of each link. Researchers manually grouped these into six broad mutually exclusive categories: 1) news organizations, including TV, print and digital; 2) social sharing sites, like blogs and social media; 3) nonprofit and research organizations, including academic institutions and think tanks; 4) health care and science sites, including doctors, hospitals and public health agencies; 5) government and political sites; and 6) all other sites. The study also took a closer look at whether a news organization had a **geographic focus** – that is, whether it focuses on news in a U.S. city or state, a foreign country, or has no geographic orientation. For example, a local TV news station has a local geographic orientation, while a 24-hour cable news network does not have one.

How we did this

Research shows that [Facebook is a key player in our modern information ecosystem](#), but understanding what information people are sharing on the giant social media platform is a major challenge. Beyond the fact that what people publish to their own walls and on most pages is private and thus not available for study, there is the challenge of size and scope among what is public. How does one study an environment in which daily posts number in the millions? In this project, we look at one slice of that ecosystem: those public spaces on Facebook that, in March 2020, included the most popular coronavirus-related posts with links to at least one source. During this time, the [United States went from having two known deaths](#) from the virus on March 1 to [stay-at-home orders in most states](#) and over 4,000 deaths by the end of the month. Examining the public spaces and sources that people turn to when posting about important topics such as the coronavirus can shed light on how people share and consume information online.

Posts about the coronavirus were collected from [CrowdTangle](#), [a public insights tool owned and operated by Facebook](#).

The study identified about 6.5 million English-language Facebook posts from public spaces that matched a set of coronavirus-related keywords ("coronavirus," "covid-19," "covid" or "corona virus") during this time period and downloaded those posts that contained a link. The average interaction rate across all coronavirus-related posts in each public space was then calculated in order to get a sense of where these coronavirus-related posts received the most engagement.

Researchers then examined the 3,000 public spaces with the highest average interaction rate for posts that mentioned coronavirus and contained a link; this amounted to a total of 93,091 public Facebook posts, each with a single link. The study extracted the links that were shared in the 93,091 posts (the text and any links in comments were not included). Each link was analyzed using a [custom Python script](#) to determine the website that published it (e.g. pewresearch.org). There were 4,860 unique sites identified in these posts; researchers manually coded these into different categories.

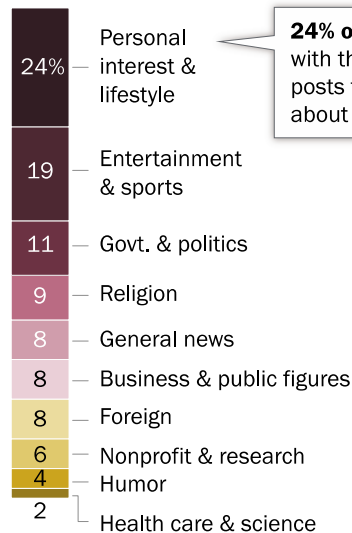For more information, see the [methodology](#).

As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups

About three-quarters (74%) of public posts about COVID-19 linked to news organizations, while just 1% linked to health and science sites

The COVID-19 outbreak has driven record traffic to news sites as most Americans have sought out information about the virus and its implications for society. Many have turned to social media to follow the developments – and even before the outbreak, about half of all U.S. adults said they get news from Facebook.
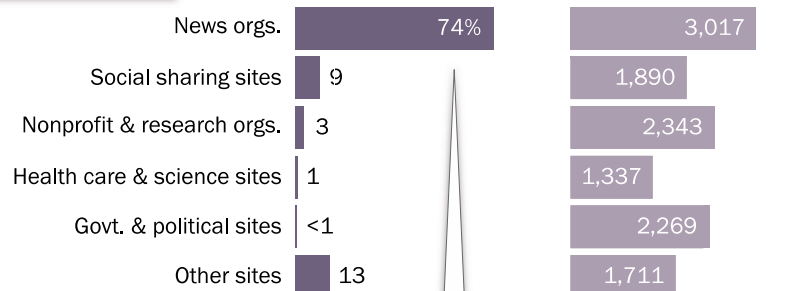
COVID-19 posts appeared in a wide spectrum of public Facebook spaces in March 2020; large majority linked to news outlets, not health care or science sites

% of public Facebook spaces in each category with the most popular COVID-19 posts with a link

24%	Personal interest & lifestyle
19	Entertainment & sports
11	Govt. & politics
9	Religion
8	General news
8	Business & public figures
8	Foreign
6	Nonprofit & research
4	Humor
2	Health care & science

24% of public Facebook spaces with the most popular COVID-19 posts that shared a link were about personal interests & lifestyle

% of COVID-19 Facebook posts that linked to …

News orgs.	74%
Social sharing sites	9
Nonprofit & research orgs.	3
Health care & science sites	1
Govt. & political sites	<1
Other sites	13

74% of COVID-19 Facebook posts with links in these public spaces linked to news orgs.

Average number of interactions per post

News orgs.	3,017
Social sharing sites	1,890
Nonprofit & research orgs.	2,343
Health care & science sites	1,337
Govt. & political sites	2,269
Other sites	1,711

Note: N=3,000 public Facebook spaces and N=93,091 COVID-19 Facebook posts. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

But where on Facebook are people finding discussions of COVID-19, what sources are users linking to, and how much are people engaging with what they find? A new Pew Research Center analysis finds that in the early days of the outbreak in the United States, coronavirus-related posts that shared links to sources of information appeared in a wide variety of public Facebook spaces (defined in this report as public pages and groups) – mainly spaces where users were already discussing other topics. For instance, about a quarter (24%) of the public spaces studied that mentioned the virus in March 2020 were personal interest and lifestyle spaces, while another one-in-five (19%) were entertainment or sports. The remainder ranged from spaces typically focused on government and politics to religion, business and humor, reflecting the outbreak's impact in many different contexts.
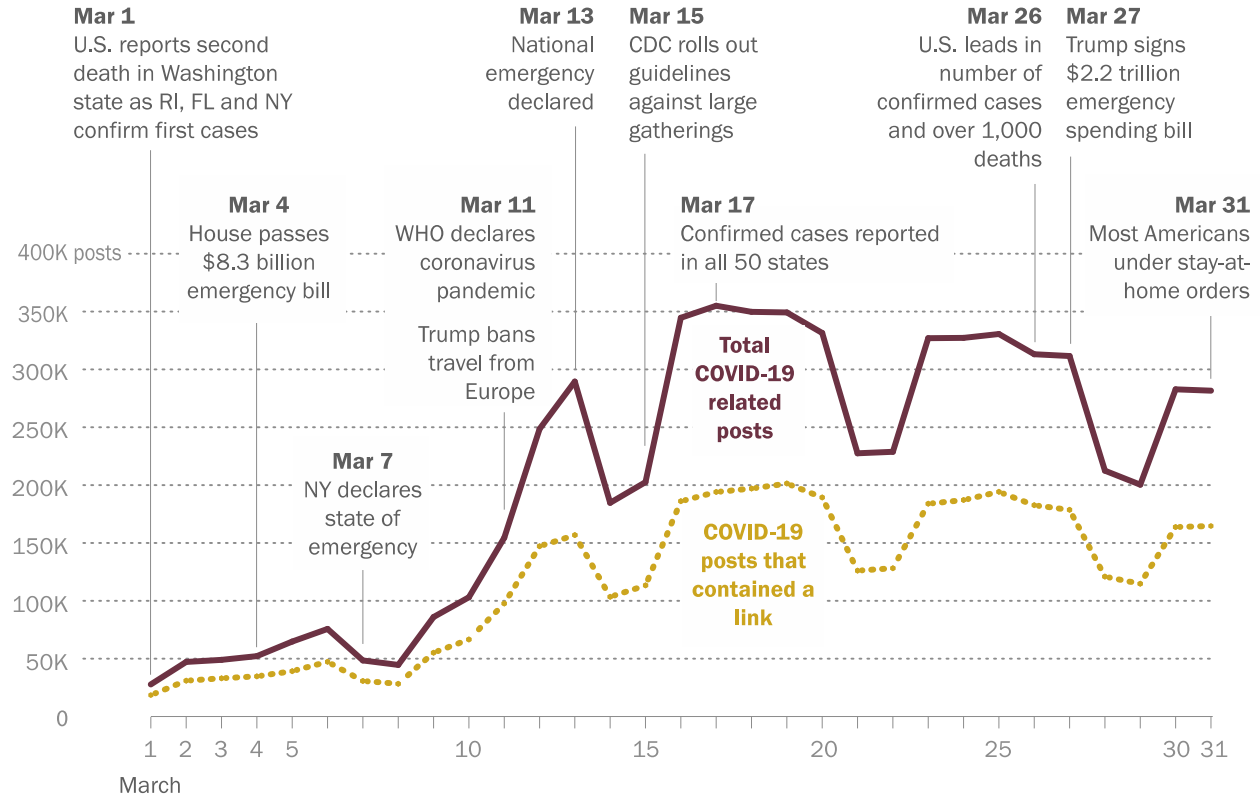
Still, many of these posts shared a striking similarity, overwhelmingly linking to one source type: news organizations. Roughly three-quarters (74%) of the coronavirus-related posts linked to news organizations' websites, while just 1% linked directly to health care or science websites. The reliance on the news media for information also comes through in the reaction these posts received: an average of about 3,000 interactions (shares, comments, likes and other reactions) per post on those that linked to news organizations, higher than for posts linking to any other kind of source type.

The study identified about 6.5 million total English-language posts that mentioned COVID-19 in more than 350,000 public Facebook pages and groups (collectively referred to as public spaces) between March 1 and March 31, 2020.

As the outbreak turned into a pandemic, the volume of Facebook posts was responsive to world events, with a tendency to dip each weekend. During the first week of March, attention paid to the coronavirus outbreak within public Facebook spaces was minimal – about 36,000 posts per day. A noticeable spike in posting activity occurred during the second week of March, as several events heightened public awareness of the threat: The World Health Organization officially declared a pandemic, President Donald Trump announced a suspension of travel from Europe, the NBA suspended its season, and Tom Hanks announced he and his wife had tested positive for coronavirus. As the outbreak continued, posting about it plateaued. About 280,000 coronavirus-related posts were published on March 31, nearly eight times the number at the beginning of the month. And throughout the month, many posts about COVID-19 included a link – about six-in-ten (58%).

Volume of COVID-19 Facebook posts tracked major events during March 2020

Number of total Facebook posts about COVID-19 published in public spaces, and posts with links

Mar 1
U.S. reports second death in Washington state as RI, FL and NY confirm first cases

Mar 4
House passes $8.3 billion emergency bill

Mar 7
NY declares state of emergency

Mar 11
WHO declares coronavirus pandemic

Trump bans travel from Europe

Mar 13
National emergency declared

Mar 15
CDC rolls out guidelines against large gatherings

Mar 17
Confirmed cases reported in all 50 states

Mar 26
U.S. leads in number of confirmed cases and over 1,000 deaths

Mar 27
Trump signs $2.2 trillion emergency spending bill

Mar 31
Most Americans under stay-at-home orders

Total COVID-19 related posts

COVID-19 posts that contained a link

Note: N=6,451,441 COVID-19 Facebook posts, 3,714,722 COVID-19 Facebook posts with a link. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

Because this study is focused on understanding the information sources that are being shared on Facebook, researchers then drilled down to posts that included links. Looking more closely at the public spaces where Facebook users posted about the coronavirus – and included links – also enabled researchers to focus on a manageable amount of data and paint a more nuanced picture of where the largest numbers of people were getting information.

Overall, the study examined 3,000 public spaces, based on the average number of interactions each coronavirus-related post with a link received. In total, across these 3,000 public spaces, 93,091 posts were published, linking to 4,860 unique websites. These public spaces were examined for their subject and geographic orientation, and researchers visited each site to determine what type of organization it was (e.g., news organization, government agency or public health site).

Some of the major findings from this analysis include:

- **Facebook posts about COVID-19 occurred across public spaces with a wide spectrum of subject orientations.** About a quarter (24%) of these public spaces were oriented around personal interest and lifestyle topics, and another 19% were dedicated to entertainment and sports. The other types of public spaces were oriented around a range of topics: government and politics (11%), religion (9%), businesses and public figures (8%), and general news (8%). The data shows the pervasiveness of COVID-19, even in spaces on Facebook that were seemingly unrelated to health, news or politics, based on the spaces' titles and descriptions.
- **Most COVID-19 Facebook posts in these public spaces linked to news organizations, and those posts garnered relatively high levels of interactions.** An overwhelming majority (74%) of public Facebook posts about the coronavirus outbreak linked to news organizations' websites. Additionally, posts that linked to news organizations received

more interactions than posts linking to any other type of site: 3,017 average interactions, 29% higher than the next highest category (nonprofit and research organizations).

- **TV and digital-native sites were the most frequently linked to types of news organizations.** Roughly half of these COVID-19 Facebook posts linked to television news sites (28%) or digital-native news sites (24%), while another 15% of all posts linked to the online homes of print newspapers and magazines. And about one-in-five of these posts linked to local sources: 21% of those posts linking to news organizations shared local news sites, such as local TV, radio or newspapers.

- **Few COVID-19 Facebook posts linked to health care and science sites, including public health sites.** Despite the medical nature of the pandemic, just 1% of the posts examined in this study linked to health care and science sites, including public health agencies like the Centers for Disease Control and Prevention (CDC) as well as the websites of doctors, hospitals and other medical entities. Posts linking to these sites also received the fewest interactions: 1,337, on average, less than half of those linking to news organizations. More specifically, posts to public health sources like the CDC, World Health Organization, and state and local health agencies that are directing the response to the pandemic or providing official coronavirus-related resources received even fewer interactions: an average of 756 per post.

- **A small portion of these public Facebook spaces were built around a specific local area in the U.S.** While a majority of the public Facebook spaces included in this study didn't have a clear geographic focus (79%), nearly one-in-ten (7%) were associated with a specific city, state or other local area in the U.S. Another 14% of these spaces focused on areas in other countries.

1. Posts about COVID-19 appeared in a wide range of public Facebook spaces

As Americans grew more aware of the threat posed by the novel coronavirus, social media became a key avenue for following related developments. This study, which examined 3,000 public Facebook spaces with the most popular COVID-19 posts in March 2020, aimed to bring to light the types of spaces where these conversations took place. (The most popular Facebook spaces were those with the highest average number of interactions on their coronavirus-related posts that contained a link.)
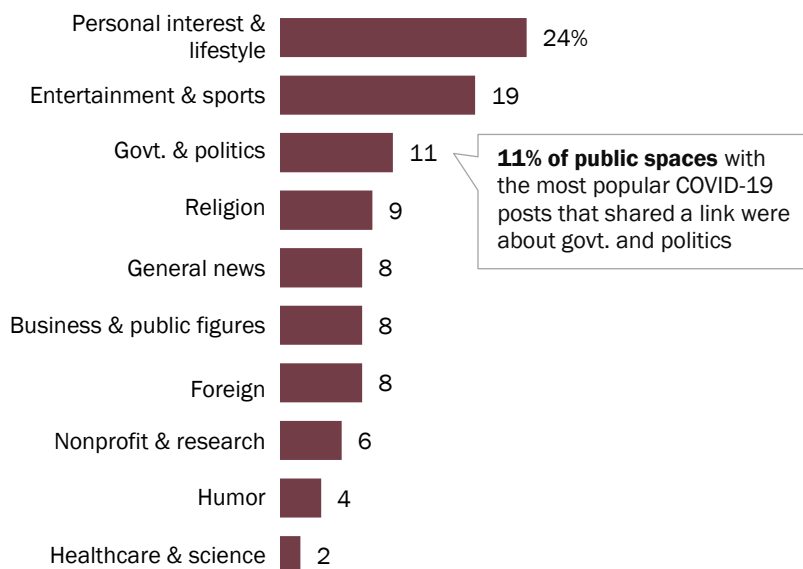
Across the public Facebook spaces studied, about a quarter (24%) were largely oriented around issues of personal interest and lifestyle, while roughly one-in-five (19%) were spaces dedicated to

Posts about COVID-19 occurred in a wide variety of public Facebook spaces in March 2020

% of public Facebook spaces in each category with the most popular COVID-19 posts that contained a link

Category	%
Personal interest & lifestyle	24%
Entertainment & sports	19
Govt. & politics	11
Religion	9
General news	8
Business & public figures	8
Foreign	8
Nonprofit & research	6
Humor	4
Healthcare & science	2

11% of public spaces with the most popular COVID-19 posts that shared a link were about govt. and politics

Note: N=3,000 public Facebook spaces. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

entertainment or sports. Personal interest and lifestyle spaces focused on a range of broad topics, including parenting (e.g. "Scary Mommy" or "Informed Parents of California"), local interests (e.g., "RANDOM VEGAS!! (pics & vids)" or "Seattle Vintage") and food (e.g., "LIVEKINDLY" or "Tasty recipes"). Many of the entertainment (15% of all public spaces) or sports (4% of all public spaces) spaces centered on a specific actor, musician or sports team.

About four-in-ten of these public spaces were in five similarly sized groups. About one-in-ten (11%) identified as a government agency or with political actors or issues, including spaces about Republican figures or groups (4% of all public spaces) and Democratic figures or groups (3% of all

public spaces). A similar share (9%) of these public spaces were about religion, while 8% were about general news – with many in the general news category dedicated to a specific news outlet (6% of all public spaces). About the same proportion of spaces described themselves as being about businesses or public figures (8%) such as Elon Musk or Neil deGrasse Tyson, or foreign issues (8%). (See detailed tables for full results.)

A slightly smaller percentage (6%) identified with a nonprofit group or research organization, including universities and fact-checking organizations. And despite the medical nature of the coronavirus threat, only 2% of the 3,000 public spaces included in this study described themselves as being solely about health care and science issues.

Relatively few of these public Facebook spaces had a clear geographic focus: 14% identified with another country or a foreign popular figure, while 7% identified with a specific city, state or other local area in the U.S. These local public spaces included those promoting local issues, like support or opposition to political leaders or parties ("Flip it Red California" or "Florida Democratic Party") or support of local causes ("Texans for Public Education"). In some cases, public spaces were dedicated to a specific local agency, such as "Wisconsin State Parks" and "Duval County Public Schools." Others celebrated the local area, such as "Cobb County Grown" or "You know you're from Bowie, MD if you remember…" And some were ways for members to share local news and information, such as "What is going on in Riverside County?"

The presence of these pages and groups shows that Facebook users were at times turning to spaces dedicated to their local areas to discuss the pandemic's impact. A recent Pew Research Center survey found that a majority of U.S.

Few public Facebook spaces explicitly focused on U.S. local regions

% of public Facebook spaces with the most popular COVID-19 posts that contained a link and had a ___ focus
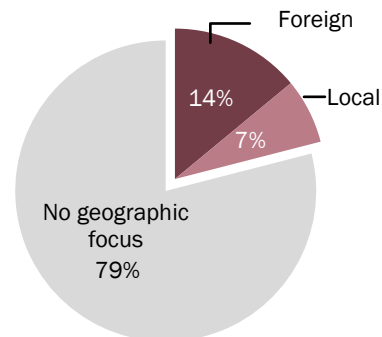
Note: N=3,000 public Facebook spaces. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

adults (61%) say they are giving about equal attention to both national and state/local coronavirus news, while about a quarter (23%) are paying closer attention to state and local news about the outbreak.

2. News organizations were most prominent source in COVID-19 content shared in public Facebook spaces

As the threat from the coronavirus became evident, Facebook users posting about the outbreak largely turned to news media sources for information to understand the developments. Links to news organizations were shared in far more COVID-19 posts than links to other kinds of source types, and posts that linked to news organizations received more interactions, on average, than posts to any other source type.
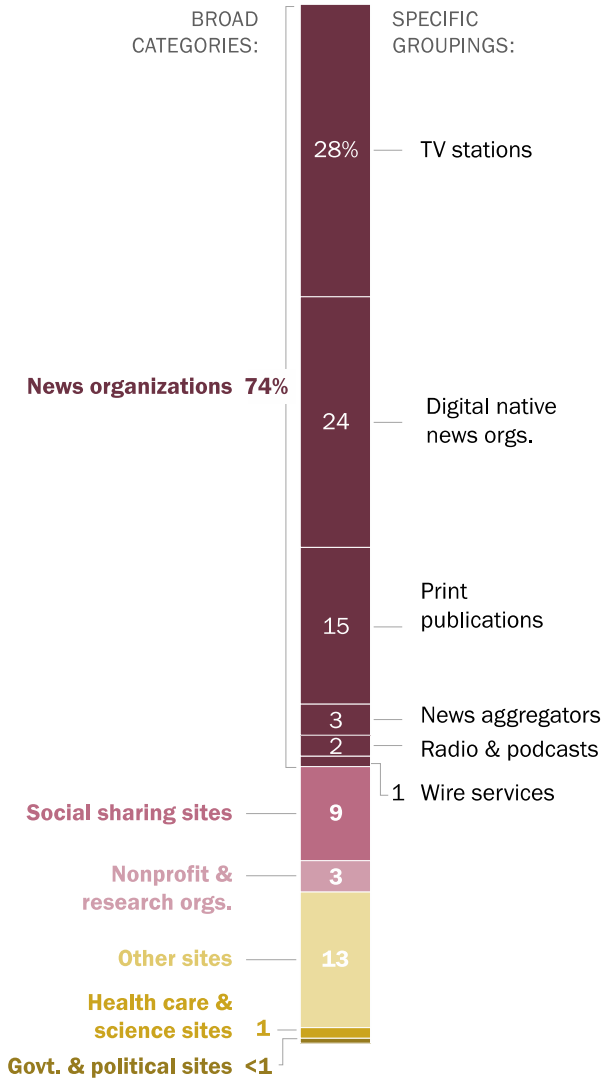
Across the 3,000 public Facebook spaces studied, there were 93,091 posts about COVID-19 that also contained a link. These sites were categorized into 20 mutually exclusive groupings across six broad categories. These broad categories are *news organizations*, *social sharing sites*, *nonprofit and research organizations*, *health care and science sites*, *government and political sites*, and *other sites*.

About three-quarters (74%) of the coronavirus-related Facebook posts with links from March 2020 linked to news organizations, including network and cable news outlets, newspapers, radio, and digital media. Far fewer posts (9%) linked to social media sites, discussion boards, or other online places where users upload content (called social sharing sites here). Even fewer linked to nonprofit or research organizations (3%), while just 1% of posts linked to health care sites, including the websites of public health agencies like the CDC, doctors, hospitals and other medical resources.

The study also dug deeper into what types of news organizations were being featured in Facebook posts. TV station sites (28%) and digital native news organizations (24%) were linked to more frequently than the online presence of print publications (15%) or other news organizations (6%). (See detailed tables for full results.)

News organizations – especially TV and digital native outlets – played largest role in COVID-19 posts on Facebook

% of Facebook posts about COVID-19 in the 3,000 public spaces studied that linked to …

BROAD CATEGORIES:

SPECIFIC GROUPINGS:

News organizations 74%
- 28% TV stations
- 24 Digital native news orgs.
- 15 Print publications
- 3 News aggregators
- 2 Radio & podcasts
- 1 Wire services

Social sharing sites 9

Nonprofit & research orgs. 3

Other sites 13

Health care & science sites 1

Govt. & political sites <1

Note: N=93,091 COVID-19 Facebook posts. Public Facebook spaces are public pages and groups. See detailed tables for all 20 specific groupings. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

And while most posts that linked to these news outlets did not have a geographic focus (77%), local news organizations played a key role, showing the continued faith that Americans place in the news media that cover their communities – even during a global pandemic. About one-in-five of those posts linking to news organizations (21%) linked to a local news organization such as a local TV or radio station or a local newspaper.

21% of COVID-19 Facebook posts linking to news organizations shared local news outlets

Among COVID-19 Facebook posts linking to news organizations in the 3,000 public spaces studied, % that linked to …
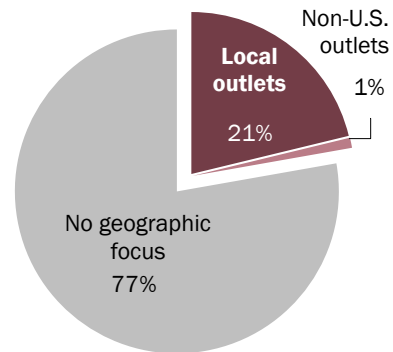
Note: N=69,020 COVID-19 Facebook posts linking to news organizations. Public Facebook spaces are public pages and groups. Only news organization sites were further analyzed to determine whether they had a local, non-U.S., or no geographic focus. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

Coronavirus-related Facebook posts that linked to news organizations tended to get more engagement

The level of interaction posts receive is also an important indicator of their impact. Here again, news organizations stand out. Facebook posts about the coronavirus that linked to news organizations tended to draw more attention, in the form of comments, shares, or reactions, than posts to any other broad type of site.

The average COVID-19 post linking to a news organization received about 3,000 interactions – 29% more than the next highest category. And a look at one specific interaction metric – the average number of times a post is shared – underscores the extent to which news organizations were part of the conversation. Posts that linked to news organizations were shared an average of 855 times, far outpacing the shares of the next highest category (nonprofit and research organizations, with an average of 588 shares per post). (See detailed tables for full results.)

COVID-19 posts linking to news organizations received highest engagement

Average number of interactions on COVID-19 Facebook posts in the 3,000 public spaces studied that linked to ...

Category	Interactions
News orgs.	3,017
Nonprofit & research orgs.	2,343
Govt. & political sites	2,269
Social sharing sites	1,890
Health care & science sites	1,337
Other sites	1,711

Note: N=93,091 COVID-19 Facebook posts. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

The other broad categories of sites received fewer interactions than news organizations. Posts linking to nonprofit and research sites received 2,343 interactions, on average, while posts linking to government and political sites received 2,269. Those that linked to user-produced sites, like social media, blogs, and discussion boards, received 1,890 interactions, on average.

When linking to health care and science sites – such as public health agencies, medical professionals and medical information sites – posts about COVID-19 tended to receive the fewest interactions: 1,337 per post. More specifically, posts to public health sources like the CDC, World Health Organization, and state and local health agencies that are directing the response to the pandemic or providing coronavirus-related resources received even less engagement: an average of 756 interactions per post. (See detailed tables for full results.)

One of the specific groupings in the "Other sites" category stands out: Despite the gravity of the pandemic – or maybe because of it – Facebook users were drawn to humorous posts. Posts that linked to satirical or humor sites, such as The Onion or McSweeney's, had a higher average interaction rate (6,287) than any other specific category of site. (See detailed tables for full results.)
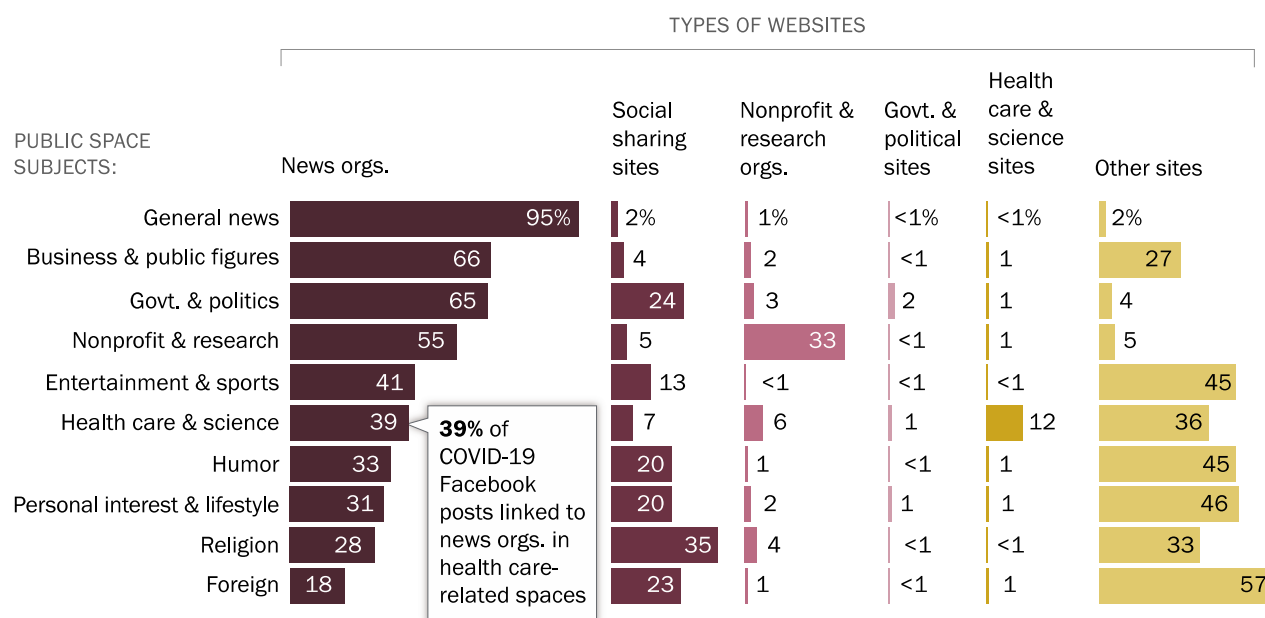
News organizations were a common source type in COVID-19 Facebook posts in public spaces oriented around different subjects

Facebook users' reliance on news organizations in coronavirus-related posts cuts across many of the different subjects around which public spaces are oriented. News organizations were linked to in a majority of posts in four of the 10 subject categories, and they were the first- or second-most common type of link destination in all but the spaces about foreign issues or religion.

Majority of COVID-19 Facebook posts linked to news organizations in four of 10 public space subject categories

% of COVID-19 Facebook posts in each subject type of the 3,000 public spaces studied that linked to each type of website

TYPES OF WEBSITES

PUBLIC SPACE SUBJECTS:	News orgs.	Social sharing sites	Nonprofit & research orgs.	Govt. & political sites	Health care & science sites	Other sites
General news	95%	2%	1%	<1%	<1%	2%
Business & public figures	66	4	2	<1	1	27
Govt. & politics	65	24	3	2	1	4
Nonprofit & research	55	5	33	<1	1	5
Entertainment & sports	41	13	<1	<1	<1	45
Health care & science	39	7	6	1	12	36
Humor	33	20	1	<1	1	45
Personal interest & lifestyle	31	20	2	1	1	46
Religion	28	35	4	<1	<1	33
Foreign	18	23	1	<1	1	57

39% of COVID-19 Facebook posts linked to news orgs. in health care-related spaces

Note: N=93,091 COVID-19 Facebook posts and N=3,000 public Facebook spaces. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

In public spaces oriented around general news, nearly all coronavirus-related posts (95%) linked to news organizations. In the other public spaces studied, posts linked to news organizations to a lesser extent. About two-thirds of the posts in spaces about businesses and public figures (66%) or government and politics (65%) linked to news organizations, while just over half (55%) of posts in

nonprofit and research-oriented spaces linked to news sites. In public spaces dedicated to health care and science issues, 39% of the posts linked to news organizations.

Despite the medical questions surrounding the novel coronavirus, health care-related sites were linked to rarely in each category. The only types of public spaces in which more than 1% of posts linked to health care sites were those about health care and science issues.

Acknowledgments

Detailed tables

COVID-19 Facebook posts, by day

Number of COVID-19 posts in public Facebook spaces (public pages and groups) by day

	Total number of posts per day	Number of posts with links
3/1/2020	27,787	18,459
3/2/2020	47,122	30,976
3/3/2020	48,929	33,002
3/4/2020	52,206	34,698
3/5/2020	64,800	39,194
3/6/2020	75,653	47,311
3/7/2020	48,383	30,713
3/8/2020	44,540	28,314
3/9/2020	86,021	55,104
3/10/2020	103,136	66,617
3/11/2020	154,449	97,618
3/12/2020	248,635	146,867
3/13/2020	289,475	156,786
3/14/2020	184,712	103,402
3/15/2020	202,531	113,307
3/16/2020	344,606	186,078
3/17/2020	355,061	194,024
3/18/2020	349,691	196,985
3/19/2020	349,233	201,351
3/20/2020	331,534	189,334
3/21/2020	227,474	126,031
3/22/2020	228,768	128,146
3/23/2020	326,962	183,895
3/24/2020	327,246	187,079
3/25/2020	330,626	194,177
3/26/2020	313,172	182,603
3/27/2020	311,584	178,618
3/28/2020	212,402	120,941
3/29/2020	200,361	114,733
3/30/2020	282,750	163,760
3/31/2020	281,592	164,649

Note: N=6,451,441 COVID-19 posts; N=3,714,772 COVID-19 posts with links. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

Public Facebook space subject types

% of public Facebook spaces in each subject category with the most popular COVID-19 posts that contained a link

	%	Total number of public spaces
Personal interest & lifestyle	**24**	726
Entertainment & sports	**19**	
Entertainment	15	452
Sports	4	112
Government & politics	**11**	
Republican	5	134
Democratic	3	95
Other political	2	69
U.S. govt. (including state and local)	1	44
Religion	**9**	261
General news	**8**	
Specific outlet	6	174
Independent journalist	1	37
Fans	<1	12
Other news	<1	10
Business & public figures	**8**	
Businesses	6	194
Public figures	2	48
Foreign	**8**	
Foreign language	6	193
Foreign & intl. govt.	2	61
Nonprofit & research	**6**	
Nonprofits & advocacy orgs.	5	163
Academic orgs.	1	24
Humor	**4**	
Memes	3	101
Satirical	1	19
Health care & science	**2**	
Nongovernmental health	1	41
COVID-19 specific	1	15
Science & medicine	<1	10
Govt. public health sources	<1	1

Note: N=3,000. Public Facebook spaces are public pages and groups. The category "Fans" refers to appreciation pages and groups of specific public media figures, media outlets and news publications. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.

Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.

"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

COVID-19 Facebook posts shared in public spaces

Among COVID-19 Facebook posts with links in the 3,000 public spaces studied, % of posts analyzed that fall into each public space category …

	%	Total number of posts
General news	56	52,092
Nonprofit & research	3	3,199
Government & politics	15	13,846
Health care & science	2	1,671
Business & public figures	2	1,844
Entertainment & sports	7	6,775
Humor	2	1,488
Religion	3	2,703
Foreign	2	2,055
Personal interest & lifestyle	8	7,418

Note: N=3,000 public Facebook spaces. N=93,091 posts analyzed. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

Public Facebook spaces, by geographic focus

% of public Facebook spaces with the most popular COVID-19 posts with links that had a ___ focus

	%	Number of public spaces within each category
Local	7	212
Foreign	14	418
No geographic focus	79	2,366

Note: N=3,000 public Facebook spaces. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

Website broad categories and specific groupings

% of COVID-19 Facebook posts in the 3,000 public spaces studied that linked to ...

	%	Total number of Facebook posts that linked to each type of site
News orgs.	**74**	
TV stations	28	26,373
Digital native news orgs.	24	22,687
Print publications	15	14,189
News aggregators	3	2,475
Radio & podcasts	2	2,261
Wire services	1	1,035
Social sharing sites	**9**	
Blogs	7	6,128
Social media	2	2,150
Other discussion sites	<1	325
Nonprofit & research orgs.	**3**	
Nonprofits & advocacy orgs.	2	1,853
Academic & research orgs.	<1	293
Fact-checking sites	<1	213
Govt. & political sites	**<1**	437
Health care & science sites	**1**	
Health care entities (e.g. hospitals, doctors)	<1	267
Public health agencies (e.g. CDC)	<1	243
Other sites	**13**	
Non-U.S. sites	7	6,885
Business sites	1	1,038
Satirical & humor sites	<1	418
Religion sites	<1	291
Other sites	4	3,530

Note: N=93,091 COVID-19 Facebook posts. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

Facebook interactions on COVID-19 posts studied, by website groupings

Average and total number of interactions on COVID-19 Facebook posts in the 3,000 public spaces studied that linked to …

	Average number of interactions per post	Total number of interactions across all Facebook posts
News orgs.	**3,017**	**208,262,698**
TV stations	3,020	79,653,635
Digital native news orgs.	3,128	70,966,399
Print publications	2,947	41,812,228
News aggregators	1,679	4,155,466
Radio & podcasts	4,146	9,374,413
Wire services	2,223	2,300,557
Social sharing sites	**1,890**	**16,263,134**
Blogs	2,363	14,479,902
Social media	557	1,198,610
Other discussion sites	1,799	584,622
Nonprofit & research orgs.	**2,343**	**5,528,105**
Nonprofits & advocacy orgs.	2,427	4,496,441
Academic & research orgs.	1,460	427,673
Fact-checking sites	2,836	603,991
Govt. & political sites	**2,269**	**991,702**
Health care & science sites	**1,337**	**681,728**
Health care entities (e.g. hospitals, doctors)	1,865	498,036
Public health agencies (e.g. CDC)	756	183,692
Other sites	**1,711**	**20,805,604**
Non-U.S. sites	951	6,549,579
Business sites	2,975	3,087,901
Satirical & humor sites	6,287	2,628,162
Religion sites	2,680	779,948
Other sites	2,198	7,760,014

Note: N=93,091 COVID-19 Facebook posts. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.

Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.

"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

Facebook shares on COVID-19 posts studied, by website groupings

Average number of shares on and total number of COVID-19 Facebook posts with links in the 3,000 public spaces studied that linked to …

	Average number of shares per post	Total number of posts
News orgs.	855	69,020
Social sharing sites	484	8,603
Nonprofit & research orgs.	588	2,359
Govt. & political sites	416	437
Health care & science sites	264	510
Other sites	481	12,162

Note: N=93,091 COVID-19 Facebook posts. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.

Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.

"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

Posts linking to news organizations, by geographic focus

Among COVID-19 Facebook posts <u>linking to news organizations</u> in the 3,000 public spaces studied, % that linked to ...

	%	Number of Facebook posts
Local outlets	21	14,790
Non-U.S. outlets	1	756
No geographic focus	77	53,474

Note: N=69,020 Facebook posts linking to news organizations. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

Sources linked to, by public spaces

% of COVID-19 Facebook posts in each subject type of the 3,000 public spaces studied that linked to each type of website

	News orgs.	Health care & science sites	Social sharing sites	Nonprofit & research orgs.	Govt. & political sites	Other sites

Public spaces subject categories	%	%	%	%	%	%
General news	95	<1	2	1	<1	2
Business & public figures	66	1	4	2	<1	27
Govt. & politics	65	1	24	3	2	4
Nonprofit & research	55	1	5	33	<1	5
Entertainment & sports	41	<1	13	<1	<1	45
Health care & science	39	12	7	6	1	36
Humor	33	1	20	1	<1	45
Personal interest & lifestyle	31	1	20	2	1	46
Religion	28	<1	35	4	<1	33
Foreign	18	1	23	1	<1	57

Note: N=93,091 COVID-19 posts; N=3,000 public spaces. Public Facebook spaces are public pages and groups. The study analyzed English-language posts about COVID-19 in the 3,000 public spaces whose coronavirus-related posts with links received the most engagement, on average.
Source: Pew Research Center analysis of CrowdTangle data of public Facebook posts about COVID-19 that contained a link, March 1-31, 2020.
"As COVID-19 Emerged in U.S., Facebook Posts About It Appeared in a Wide Range of Public Pages, Groups"

PEW RESEARCH CENTER

Methodology

This study takes a close look at the public spaces (public pages and groups) on Facebook in which coronavirus-related posts with links in March 2020 received a high level of interactions. During this time, the United States went from having two known deaths from the virus on March 1 to a stay-at-home order in most states and over 4,000 deaths by the end of the month. Examining the public spaces and sources that people turn to when posting about important topics such as the coronavirus can shed light on how people share and consume information online.

Terminology

Public spaces: These are defined in this study as the Facebook pages and groups where posts are public (Facebook distinguishes between pages and groups, but they were combined here). The study analyzed English-language posts about COVID-19 in the 3,000 public spaces (1,500 pages and 1,500 groups) whose coronavirus-related posts with links received the most engagement, on average. Public spaces were coded for their **subject orientation** and their **geographic focus**.

Public spaces *subject orientation*: The different types of public spaces are determined by the main topic the public space is oriented around. Researchers manually categorized public Facebook spaces into 10 categories based on their title and "about" section: 1) personal interest and lifestyle; 2) entertainment and sports; 3) government and politics; 4) religion; 5) general news; 6) business and public figures; 7) foreign; 8) nonprofit and research; 9) humor; and 10) health care and science. For example, a public space called "Informed Parents of California" was classified as personal interest and lifestyle.

Public spaces *geographic focus*: This indicates whether a public space explicitly referenced a local city, town, neighborhood or state in the U.S.; a foreign country or area; or did not have a geographic focus, including those about the U.S. generally. For instance, the "Informed Parents of California" space had a local focus.

Public posts: These are the English-language coronavirus-related posts with links in the 3,000 public spaces analyzed. Coronavirus-related posts are those that match a set of coronavirus-related keywords ("coronavirus," "covid-19," "covid" or "corona virus"). This research identified about 6.5 million Facebook posts published during March 2020 (including those that did not share a link), but the main analysis focused on the 93,091 posts with links about COVID-19 from the 3,000 public spaces, based on the average number of interactions their coronavirus-related posts with a link received.

Interactions: These are the total number of comments, shares, likes and other reactions to these posts. The average coronavirus-related post with a link in this study had 2,713 total interactions.

Sources: These are the sites (e.g. pewresearch.org) that are linked to in these posts (referred to both as sources and sites). The 93,091 Facebook posts analyzed in this study linked collectively to 4,860 distinct sites across the 3,000 public spaces. Sources are coded by **source type**.

Source type: This describes the different types of websites found at the destination of each link. Researchers manually grouped these into six broad mutually exclusive categories: 1) news organizations, including TV, print and digital; 2) social sharing sites, like blogs and social media; 3) nonprofit and research organizations, including academic institutions and think tanks; 4) health care and science sites, including doctors, hospitals and public health agencies; 5) government and political sites; and 6) all other sites. The study also took a closer look at whether a news organization had a **geographic focus –** that is, whether it focuses on news in a U.S. city or state, a foreign country, or has no geographic orientation. For example, a local TV news station has a local geographic orientation, while a 24-hour cable news network does not have one.

Data collection

Posts about the coronavirus were collected from [CrowdTangle](#), [a public insights tool owned and operated by Facebook](#). CrowdTangle gives academic and researchers access to public posts in their database that match keywords that the researcher supplies in their query.

In this study, researchers searched CrowdTangle using two approaches described below in order to collect the most accurate number of coronavirus-related posts.

Approach 1: Search interface

The first method used the search interface to get estimates of the number of posts matching selected keywords each day in both public pages and public groups. The search interface provides results in which the selected keywords appeared in the post message or in the text of the link, if a link is included in the post. The keywords used in this analysis are "coronavirus," "covid-19," "covid" or "corona virus"

These keywords were selected to ensure only posts about the outbreak were included. Researchers also tested additional keywords, including "outbreak," "pandemic" and "lockdown," which provided similar results.

This search extended to both public pages and public groups, though there were small differences in how the individual groups and pages were filtered (in this study public pages and groups are analyzed together as public spaces). Unique criteria for inclusion in this analysis were applied for posts in public pages and groups.

- *Posts in public pages:* English-language posts and those posted in pages whose owners were based in the U.S. were included if they were in the CrowdTangle database.
- *Posts in public groups:* English-language posts were included. There is no functionality in CrowdTangle to select U.S. ownership for groups, but the CrowdTangle data only includes U.S.-based groups with at least 2,000 members.

Using the CrowdTangle search interface, researchers recorded CrowdTangle's daily estimates of the number of posts that matched these criteria. Thus, the study identified 6.5 million English-language Facebook posts from public spaces that matched these keywords from March 1 to March 31, 2020. Just under 4 million (3.7 million) of these posts had a link. Most of this study's analysis focuses on posts about COVID-19 that contained a link (see the method for this analysis below). The 6.5 million Facebook posts were used for the timeline analysis in the overview section of the report [LINK].

Approach 2: Historical data interface

Most of this report's analysis used data collected from CrowdTangle's Historical Data interface.

Researchers saved a search in CrowdTangle's interface using the same search parameters (keywords and specific criteria for pages and groups) described above and used this interface to download all posts matching those criteria that included a link (CrowdTangle only provides data on the first link in the post) from March 1 to March 31, 2020. These data were downloaded April 14-16, 2020.

After removing duplicate posts, there were 3.6 million posts considered for this analysis.

Selecting public spaces

Once all coronavirus-related posts with links were downloaded (N=3.6 million), the average interaction rate across all posts in each public space was then calculated. This allowed researchers to get a sense of where these coronavirus-related posts received the most attention.

Researchers then examined the 3,000 public spaces (1,500 pages and 1,500 groups) with the highest average interaction rate for posts that mentioned coronavirus and contained a link; this amounted to a total of 93,091 posts.

The interaction rate measures the level of engagement a post received. Interactions are defined as the comments, shares and reactions a post received (including like, wow, love and other reactions) and was calculated as the sum of all interactions.

This study specifically looked at the interaction rate across all coronavirus-related posts with links in the public spaces studied. This was calculated using the mean interactions (or average

interactions) of these posts. For example, across the 3,000 public spaces, all coronavirus-related posts that linked to news organizations had an average of 2,713 interactions.

Another approach is to measure the interaction rate using the *median* interaction rate instead of the *mean*. The average gives a general indication of how much engagement posts are receiving, which could be influenced by a small number of posts that go viral. In contrast, the median shows the typical post and would not be influenced by virality. Because this study looks at the broad environment, researchers compared the mean and median and found similar patterns in the findings.

For these reasons, this study uses the average interaction rate to select public spaces to study. The 1,500 public pages and 1,500 public groups with the highest average interaction rate were included in this study.

Collecting websites

The next step was the analysis of links published in posts about COVID-19. The study extracted the links that were shared in the 93,091 coronavirus-related posts (the text and any links in comments were not included). This analysis aimed to identify the different websites used when posting about COVID-19.

Link cleaning

Many users post links with link shorteners such as bit.ly or share.gs rather than the full URL. CrowdTangle expands many of these shortened URLs into the full URL in the data it provides, but it does not do so for all links. CrowdTangle does not consistently provide expanded links for those organizations or individuals using custom shorteners (for example, Pew Research Center uses links that begin with pewrsr.ch instead of pewresearch.org). To determine the site that was linked to in the full URL, researchers followed all URLs and recorded the final destination using a custom Python script.

Each link was then analyzed using a custom Python script to determine the site that published it (e.g. pewresearch.org/facebook_study.html was published on pewresearch.org). Researchers then manually analyzed each site to ensure there were no duplicates or subdomains (e.g., newsletters.pewresearch.org would be included in pewresearch.org). This process identified 4,860 unique sites in the 93,091 coronavirus-related posts.

Content analysis

This study conducted a content analysis of each of the 3,000 public spaces and the 4,860 sites. Five coders were trained and performed this content analysis. All codes were then reviewed by a team of at least two researchers, including at least one that was not part of the original coding.

The 3,000 public spaces were coded for two variables:

- **Subject** orientation refers to the broad topic that the public space is oriented around. For each public space, researchers examined the name as returned in the CrowdTangle data. They also performed Google and Facebook searches if the name itself was unclear. Individual posts on a given public space were not considered to determine the subject orientation for each public space. This resulted in a total of 10 broad categories used throughout the report – public spaces oriented around:
    - Personal interest & lifestyle
    - Entertainment & sports
    - Govt. & politics
    - Religion
    - General news
    - Business & public figures
    - Foreign
    - Nonprofit & research
    - Humor
    - Health care & science

- **Geographic focus** indicates whether a public space explicitly referenced a local city, town, neighborhood or state in the U.S., a foreign country or area, or did not have a geographic focus.

The 4,860 websites were analyzed for two variables:

- **Source type** describes the different types of websites that coronavirus-related posts linked to. There were a total of 20 mutually exclusive source types, grouped into six broad categories:

    - _News organizations_ – Television stations, digital native news organizations, print publications, news aggregators, radio & podcasts, wire services

    - _Social sharing sites_ – Blogs, social media sites, other discussion sites

    - _Nonprofit & research organizations_ – Nonprofit & advocacy organizations, academic & research organizations, fact-checking sites

- *Health care & science* – Health care entities (e.g., hospitals, doctors), public health agencies (e.g., CDC)

- *Government and political sites* – no subcategories

- *Other sites* – Non-U.S. sites, business sites, satirical & humor sites, religion sites, other sites

Geographic focus: This variable was only analyzed for those sites that were news organizations, as described above. This variable identified whether a news organization was local (the outlet focused on news in a U.S. city, state or another specific local area), non-U.S. (the outlet focused on a foreign country or area) or had no geographic focus.

Coders were given multiple sets of public spaces and sites to evaluate during the training process. Coding began once internal agreement of how to code the variables was established. The Cohen's kappa (for public spaces, which had two coders) and Krippendorff's alpha (for sites, since there were more coders) estimate for each variable is below. During this process, coders trained on 300 public spaces and 205 sites.

- Public spaces subject orientation: 0.83
- Public spaces geographic focus: 0.88
- Sites source type: 0.91

Analysis of the geographic focus for news organizations was done collaboratively with two coders and was not tested for intercoder reliability, as they talked through each case.

Throughout the coding process, coders discussed questions as they came up and arrived at decisions under the supervision of the content analysis team leader.