

Methodology

This Pew Research Center analysis examines all English-language tweets posted between Sept. 1, 2022, and Jan. 14, 2023, by accounts affiliated with Republican members of the 118th U.S. House of Representatives. Researchers obtained from Ballotpedia a list of officeholders for the 118th Congress that included demographic characteristics (party affiliation, district, etc.) and any official Twitter handles. This list was combined with a dataset of candidate accounts that was used [in a previous analysis](#). Not all House Republicans use Twitter, so the resulting list consists of official, personal and campaign Twitter accounts for 181 Republican members of the 118th House.

Next, researchers collected tweets shared from Sept. 1, 2022, to Jan. 14, 2023, from all public Twitter handles (valid as of Jan. 12, 2023) listed in the dataset using the Twitter Search API. Using the Twitter API's flag for language, the collected tweets were subsequently filtered to include only those written in English, resulting in a total of 52,109 tweets from 181 Republican House members.

Identifying members of the House Freedom Caucus

Unlike other congressional caucuses, the Freedom Caucus does not disclose an official member list, although 16 current members list their Freedom Caucus affiliations on their official House websites, and various unofficial lists have circulated. Membership is by invitation only, and meetings are not public. For those reasons, it can be hard to distinguish between representatives who belong to the caucus and those who work closely with it but aren't full members.

Pew Research Center compiled its list from a variety of sources, including members' websites, the 2022 endorsement list from the caucus-affiliated House Freedom Fund, and published reports from reputable news outlets. For each member, we sought confirmation from at least two unrelated sources before adding them to the list. Altogether, researchers identified 49 Republicans in the 118th House of Representatives who were either members or allies of the Freedom Caucus.

Of those 49, researchers identified 41 members (55 total accounts), who had a public-facing Twitter account and tweeted during the study period.

Identifying the substantive topic areas in member's tweets

To identify the substantive topics mentioned in members' tweets, researchers first developed a list of topics and used a series of machine learning models and term dictionaries to code each of the 52,109 tweets. This process is [described in further detail here](#).

The final list of topics included in this analysis, along with the model prompt and performance metrics, are listed in the table below.

Predicting substantive topics

Topic name	Description	Model prompt used	Performance
Big Tech	Tweets about tech companies (especially social media), privacy, content moderation, bias and regulation.	<i>"big tech or tech companies"</i>	Accuracy: 0.991 Cohen's Kappa: 0.762 F1 score: 0.766
Education	Tweets about education/educational policy. Can include references to school boards, curriculum restrictions/book banning, charter schools/school choice, student loan forgiveness.	<i>"education and schools"</i>	Accuracy: 0.989 Cohen's Kappa: 0.699 F1 score: 0.705
Free speech	Tweets about freedom of speech and freedom of expression, including references to censorship, "wokeness" and "cancel culture."	<i>"free speech or censorship"</i>	Accuracy: 0.991 Cohen's Kappa: 0.727 F1 score: 0.732
Government oversight	Tweets about oversight of the government, including investigations of the Biden administration and/or adjacent figures such as Hunter Biden. Can include descriptions of perceived government overreach that should be subject to oversight.	<i>"oversight and investigation of the government"</i>	Accuracy: 0.985 Cohen's Kappa: 0.775 F1 score: 0.783
Immigration	Tweets about immigration and immigration policy. Can include references to DACA/Dreamers, "open/closed borders," ICE, "build the wall."	<i>"immigration or border security"</i>	Accuracy: 0.988 Cohen's Kappa: 0.898 F1 score: 0.905
LGBTQ+ rights and issues	Tweets about LGBTQ+ identities, issues and rights. Can include policy areas such as marriage equality or bathroom bans, as well as more general statements of support or opposition.	<i>"LGBTQ"</i>	Accuracy: 0.998 Cohen's Kappa: 0.791 F1 score: 0.792
Religion	Tweets about religion and faith, including references to religious freedom and religious beliefs as exemptions from vaccine requirements, providing goods or services to LGBTQ+ customers, school participation, etc.	<i>"religion"</i>	Accuracy: 0.986 Cohen's Kappa: 0.713 F1 score: 0.72

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Identifying the sentiment of members' tweets

To measure the sentiment of candidates' tweets, researchers used a Transformer language model called [RoBERTa-base sentiment classifier](#), specifically developed for sentiment identification in tweets. To preprocess the tweets for sentiment classification, all emoji characters were replaced with their text descriptions. The performance of this sentiment classifier was evaluated against a hand-labeled set of 500 candidate tweets and achieved 98.4% accuracy, an F1 score of 0.984 and a Cohen's Kappa of 0.976.

Identifying mentions of other Representatives in members' tweets

To identify cases where one GOP representative mentions another in a tweet, researchers compiled lists for all 222 members of the House Republican Conference that included the member's full name, along with all associated "@" Twitter handles. A match for any of those terms within a tweet's text was then considered a mention of that member.

Identifying topic-specific 'distinctive' language for Freedom Caucus Republicans and other House Republicans

To identify unique, topic-specific language that representatives use to frame the issue areas examined in this analysis, researchers used [pointwise mutual information](#). For each topic considered, researchers produced a list of 50 terms that best distinguish tweets on that topic by any House Republicans from tweets on other topics, as well as lists of the 50 most distinctive terms that distinguish on-topic tweets by Freedom Caucus Republicans from on-topic tweets by other House Republicans, and vice versa. These distinctive term lists were then compared between groups to reveal instances of both similarity and distinctiveness in how the Freedom Caucus and others in the House Republican Conference discuss different issues.

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