The Impact of COVID-19 on American Attitudes toward China


The outbreak of the COVID-19 epidemic in 2020 has unleashed devastating hardships in the U.S. and around the world. U.S.-China relations had already begun to fray prior to the pandemic, but the downward spiral in bilateral relations has only continued to accelerate since the viral outbreak. Researchers leverage the suddenness and magnitude of COVID-19 to examine how profoundly the 2020 outbreak changed American attitudes toward China and describe the potential implications of their findings for the future direction of U.S. foreign policy toward the P.R.C.

The data. The research team collected more than 297 million unique tweets posted between January 2017 and June 2020, containing China-related and/or COVID-19 related keywords. In order to disentangle attitudes toward China from those expressed toward COVID-19, researchers identified a subset of roughly 69 million unique English-language tweets mentioning China, but not COVID-19. Within this subset, they further analyzed individual-level changes in attitude toward China by evaluating posts of Twitter users located in the U.S. who had tweeted at least once about China per month from January to April 2020. Using machine learning, researchers rated each of the 69 million tweets on its expressed sentiment toward China on a scale of −100 (most unfavorable) to 100 (most favorable).

Rapid increase in volume of China-related tweets. Americans reacted to the 2020 coronavirus outbreak in two distinct phases: first in January 2020, when COVID-19 initially broke out in Wuhan, China; and then again in March 2020, when the virus began to actively spread in the U.S. Within four weeks of January 2020, the daily volume of users who mentioned China in tweets reached a peak of 46,792, over six times the usual level. Then, after a brief respite toward the end of February 2020, the volume reached a second peak in mid-March with a total of 66,535 users mentioning China on a single day. Over the time span of the dataset, tweet volume on China had reached a three-year high by mid-March 2020.

Rapid decline in American attitudes. Simultaneous with this rapid increase in tweet volume, the average attitude of U.S. Twitter users toward China declined sharply within two months after the Wuhan outbreak. This decline was much more severe than any other dip in China-related sentiments over the three years captured by the dataset. In a range from −100 (most unfavorable), −50 (somewhat unfavorable), 0 (neutral), 50 (somewhat favorable), to 100 (most favorable), the average sentiment of China-related tweets declined from −15.6 on January 20 to −31.7 on February 17, before eventually reaching a three-year low of −41.1 on March 18.

This steep drop over those two months was highly abrupt, suggesting that the increasing prevalence of anti-China attitudes on Twitter was not the result of normal swings, but rather precipitated by some external trigger.

INSIGHTS

- The outbreak of the COVID-19 pandemic in 2020 triggered a swift rise in China-related tweets, reflecting an unprecedented level of attention in U.S. public opinion toward China.

- Researchers establish a causal link between the outbreak of the COVID-19 pandemic and a sharp decline in American attitudes toward China.

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Plummeting attitudes triggered by COVID-19 outbreak. To empirically establish causality between awareness of COVID-19 and rapid decline in user attitude toward China, researchers used two distinct analytical strategies. First, using Twitter timestamps, researchers identified the day when a user first posted a COVID-19 related tweet. Researchers then compared the user’s average sentiment toward China one week before the post to that user’s sentiment toward China one week after the posting. Researchers observed a marked shift, specifically a sharp dip of −5.28, in an individual’s attitude toward China one week after exposure to information about COVID-19.

The attitudes of users, on average, continued to decline slowly for another six weeks before reaching its lowest point. The step-function-like curve displayed a sharp, statistically significant discontinuity around the treatment day, which supports the causal hypothesis.

The researchers used a second analytical method to confirm the robustness of their results. For every week in January and February 2020, researchers created a “treatment” group that included all individuals who had tweeted about COVID-19 before a given week and a control group that included all individuals who had not yet tweeted about COVID-19 by that week.

The researchers found that the treatment group and the control group held very similar attitudes toward China until the treatment week; but after exposure to knowledge about COVID-19, the drop in the treatment group’s attitudes toward China was abrupt and statistically significant. More specifically, the treated group’s attitude toward China deteriorated suddenly by an average of −4.21 once they tweeted about COVID-19, while the control group’s attitudes toward China remained almost constant. This abrupt discontinuity in the attitudes of users again suggests a causal relationship between their awareness and the drop in sentiment toward China.

Attitudes constrain political action. Researchers find that rising awareness of COVID-19 triggered a marked rise in anti-China sentiment on Twitter and posit that Americans may be associating China with COVID-19 and blaming China for the loss of life in the U.S. and damage to their economic well-being. As a democracy, views of the U.S. public toward China can constrain and shape the actions and policies of the U.S. government. Given that the public now views China even more negatively following the outbreak of COVID-19, this research suggests that the U.S. government may continue to adopt anti-China rhetoric and policy positions into the near future.