

These red flags can let you know when you're in an online echo chamber

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Researchers at UC Santa Cruz have identified specific elements of tone and style in online speech that are linked to hyperpartisan echo chambers. The findings are now published in the journal *Discourse &*

Society.

Online echo chambers are virtual spaces that gather like-minded individuals. Prior research has shown that people are more likely to believe and share information they encounter in these spaces, because it confirms their existing beliefs. Echo chambers are also an ideal venue for hyperpartisanship, or rigid political ideology that shows a strong bias toward one perspective, while attacking another.

Hyperpartisan communication is not objective or necessarily rooted in fact, and research has found that some social media users who routinely engage in this style of communication also spread disinformation: content that is intentionally deceptive.

"Hyperpartisan communication is related to what we call 'alternative reality communication,'" explained Psychology Professor Jean E. Fox Tree, senior author of the new paper. "Examples include things like urban legends, disinformation, [fake news](#), and any type of information that is overblown in various ways. It's important to understand why this type of information gains so much traction, and one theory is there's a shared style of communication that's part of that."

In particular, alternative reality communication has previously been shown to feature aspects like strong emotion and display of in-group status that are believed to contribute to its rapid spread. This made the research team wonder if linguistic markers of spontaneous communication could reliably indicate that a space is a hyperpartisan echo chamber. Spontaneous communication is an off-the-cuff style of speech that includes informality, familiarity, and strong emotion, rather than careful composition.

"People use spontaneous communication in order to create a sense of personal closeness, and that can lead to increased uptake in information,"

said Cognitive Psychology Ph.D. candidate Allison Nguyen, lead author of the new study.

To look for evidence of this style of communication in hyperpartisan spaces, researchers analyzed 47,112 comments on Reddit within eight political subreddits. Four were non-hyperpartisan, with stated intentions of facilitating discussion among people with differing viewpoints or more moderate political views. The other four were classified as hyperpartisan, because they catered to specific political viewpoints that were far from center. Two of those were on the right, and two were on the left.

The analysis showed that elements of spontaneous communication that convey strong emotion, like swear words and exclamation marks, were good predictors of hyperpartisan echo chambers, as were "I" and "you" pronouns, which convey familiarity. There was also a strong link with elements that mimic the feeling of face-to-face conversation, including discourse markers, like "oh," "well," and "you know," which direct the flow of conversation, and prepositions, like "with," "in," and "during," that convey a sense of space and time.

Non-hyperpartisan subreddits, on the other hand, used a very different style of communication. Those [virtual spaces](#) emphasized third-person pronouns, periods as the primary form of punctuation, and use of quotations. The research team suspects these language features may be used to convey a distanced, neutral approach, with a focus on evidence and precision.

The pronounced difference between the common use of spontaneous communication elements in hyperpartisan comments and the relative lack of these features on non-hyperpartisan spaces suggests that they could be used to identify hyperpartisan echo chambers. And because hyperpartisan [communication](#) has been associated with disinformation,

these language markers could also prove useful for flagging spaces where disinformation may be likely to emerge.

"A lot of people get their news from spaces on the internet, and maybe this research can help people learn how to spot whether they're in some sort of [echo chamber](#) or bubble online," Nguyen said. "Knowing what to look for and which spaces to be wary in is really important in how we can prevent the spread of disinformation."

More information: Allison Nguyen et al, Look, Dude: How hyperpartisan and non-hyperpartisan speech differ in online commentary, *Discourse & Society* (2022). [DOI: 10.1177/09579265221108022](#)

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