Echo chambers may not be as dangerous as you think, new study finds

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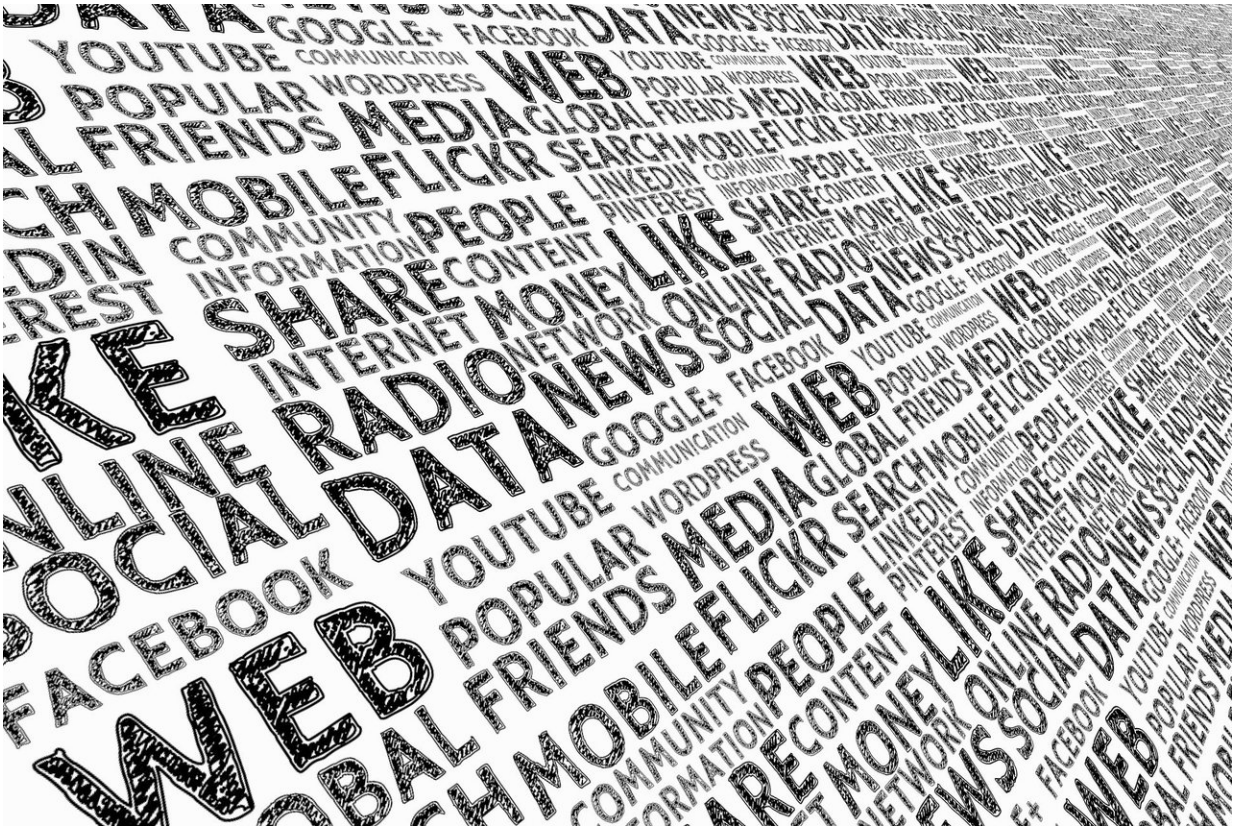

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In the wake of the 2016 American presidential election, western media outlets became almost obsessed with echo chambers. With headlines like "Echo Chambers are Dangerous" and "Are You in a Social Media Echo

Chamber?" news media consumers have been inundated by articles discussing the problems with spending most of one's time around likeminded people.

But are social bubbles really all that bad? Perhaps not.

A new study from the Annenberg School for Communication at the University of Pennsylvania and the School of Media and Public Affairs at George Washington University in the *Proceedings of the National Academy of Sciences*, shows that collective intelligence—peer learning within social networks—can increase belief accuracy even in politically homogenous groups.

"Previous research showed that social information processing could work in mixed groups," says lead author and Annenberg alum Joshua Becker (Ph.D. '18), who is currently a postdoctoral fellow at Northwestern University's Kellogg School of Management. "But theories of political polarization argued that social influence within homogenous groups should only amplify existing biases."

It's easy to imagine that networked collective intelligence would work when you're asking people neutral questions, such as how many jelly beans are in a jar. But what about probing hot-button political topics? Because people are more likely to adjust the facts of the world to match their beliefs than vice versa, prior theories claimed that a group of people who agree politically would be unable to use collective reasoning to arrive at a factual answer if it challenged their beliefs.

"Earlier this year, we showed that when Democrats and Republicans interact with each other within properly designed social media networks, it can eliminate polarization and improve both groups' understanding of contentious issues such as climate change," says senior author Damon Centola, Associate Professor of Communication at the Annenberg

School. "Remarkably, our new findings show that properly designed social media networks can even lead to improved understanding of contentious topics within echo chambers."

Becker and colleagues devised an experiment in which participants answered fact-based questions that stir up political leanings, like "How much did unemployment change during Barack Obama's presidential administration?" or "How much has the number of undocumented immigrants changed in the last 10 years?" Participants were placed in groups of only Republicans or only Democrats and given the opportunity to change their responses based on the other group members' answers.

The results show that individual beliefs in homogenous groups became 35% more accurate after participants exchanged information with one another. And although people's beliefs became more similar to their own party members, they also became more similar to members of the other political party, even without any between-group exchange. This means that even in homogenous groups—or echo chambers—social influence increases factual accuracy and decreases polarization.

"Our results cast doubt on some of the gravest concerns about the role of echo chambers in contemporary democracy," says co-author Ethan Porter, Assistant Professor of Media and Public Affairs at George Washington University. "When it comes to factual matters, political echo chambers need not necessarily reduce accuracy or increase polarization. Indeed, we find them doing the opposite."

It is important to note, Becker points out, that participants in this study were motivated to be accurate, which is an important factor in social information processing. More research is needed to understand what would happen to belief accuracy when a group is motivated to stir up controversy rather than reach an accurate consensus.

"Many political theorists and practitioners have advocated for the value of deliberative democracy, which has as its cornerstone the ability to learn from one another," says Annenberg Professor Michael X. Delli Carpini, who was a member of Becker's dissertation committee. "But there's been a longstanding question of whether deliberation actually works as intended. This study is a good step toward answering that question."

The study, "The Wisdom of Partisan Crowds," is available from *PNAS*.

More information: Joshua Becker el al., "The wisdom of partisan crowds," *PNAS* (2019). www.pnas.org/cgi/doi/10.1073/pnas.1817195116

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