



## Research at CERGE-EI on the Economics of the Information Age

### Echo chambers - are they useful?

Why do people form "echo chambers"? Why do they often communicate with those similar to themselves instead of seeking diverse viewpoints? Do echo chambers limit our understanding of the world, and do they hold society back?

Research at CERGE-EI suggests the answer is more nuanced. In highly polarized environments, smaller, like-minded groups can improve communication by reducing the pressure to mislead others during discussions. People with opposing ideologies may struggle to communicate with each other productively, while smaller groups with shared views can often engage in more honest exchanges, even at the cost of lower diversity. Instead of only considering which communication could be possible if we bring people with diverse viewpoints together, we should consider which communication is actually possible. This challenges the notion that echo chambers are always harmful.

However, echo chambers can also reinforce biases and deepen societal divides. Their effects depend on context—while they may encourage honest communication in some situations, they can hinder broader understanding. Policymakers and platform designers must carefully balance fostering focused discussions with bringing together diverse viewpoints.

(Based on the working paper "Why Echo Chambers Are Useful" by Ole Jann, CERGE-EI, and Christoph Schottmüller, University of Cologne, 2023.)

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### Who benefits from censorship?

Censorship can have several effects. While it can deprive people of important information, it can also lead news consumers to distrust what they see, unsure whether a lack of bad news reflects reality or censorship. Both of these effects harm the overall flow of information.

Research at CERGE-EI highlights when censorship is harmful and when it might actually be beneficial. For instance, if a firm censors conclusive bad news (e.g., a new product is harmful), consumers are being deprived of important information and become more skeptical of what they hear as a result - everyone suffers. But when bad news is inconclusive, censorship can signal confidence and improve outcomes by preventing premature negative reactions. A company that believes in its product has a stronger incentive to censor - since it believes in ultimate success, whereas a company that knows it has a dodgy product finds it less attractive to censor because it knows that the truth will come out eventually. Censorship may hence be in itself informative and improve the flow of information, to the benefit of everyone involved.

These findings have policy implications, such as for Europe's "right of erasure" law. Suppressing inconclusive information, like rumors, may benefit individuals and society. However, censoring definitive information, like criminal records or products failing safety tests, can harm the public. The research emphasizes that censorship's impact depends on the context and nature of the information.

(Based on "A Dynamic Model of Censorship" by Yiman Sun, CERGE-EI, published in *Theoretical Economics*, 2024.)

## Political debate on social media

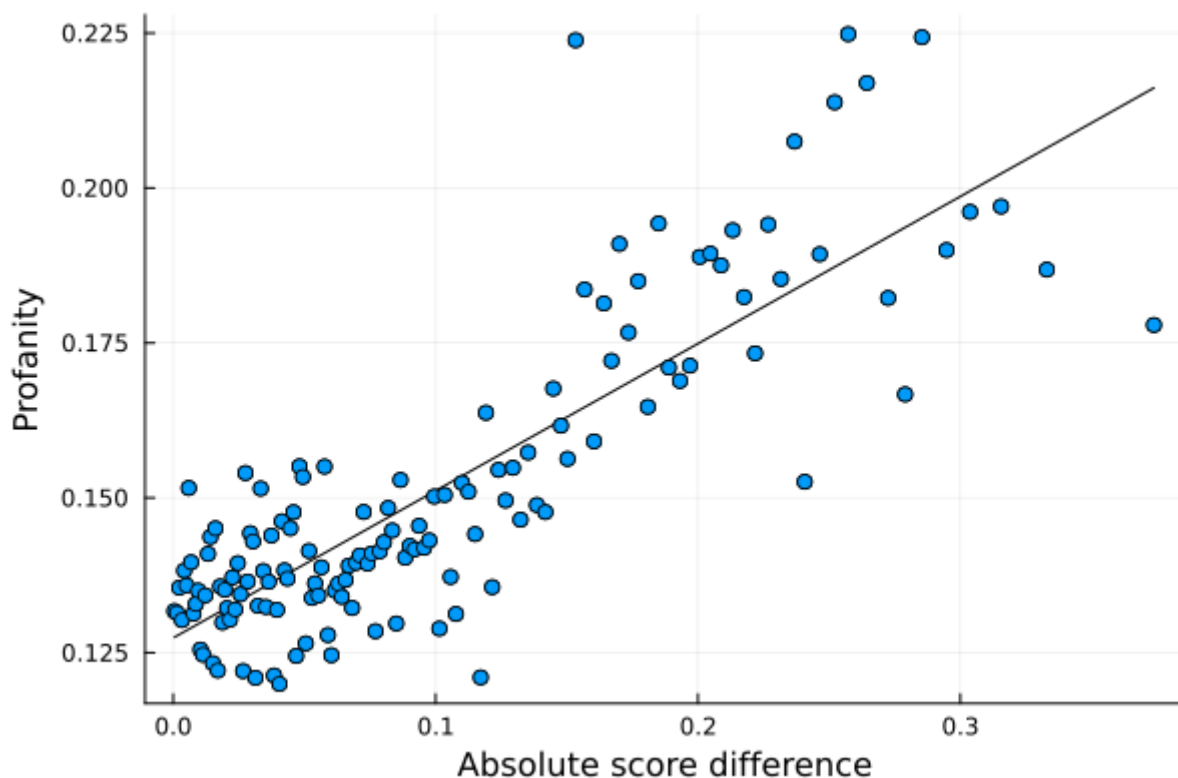
When people first started communicating on the Internet, expectations were great: Here, finally, was an open, equal, and non-coercive means of communication. People could exchange facts and views and, through deliberation, make the world better. The reality is different: Online political discussion is often described as toxic, polarized and unproductive.

Research at CERGE-EI examines how this dysfunction is a consequence of the motivations of participants of online debate, who balance a desire to exchange information with the urge to assert partisan positions and express emotions. Using a mix of theoretical modeling and a large-scale dataset of interactions on *Twitter* (before it was called *X*), the paper explores how ideological distance affects the tone, content, and credibility of online communication.

The findings suggest that because people find it hard to communicate over ideological divides, they may strategically deploy tools like hyperlinks and complex arguments to improve their credibility. At the same time, the constant presence of aggressive language gives rise to another behavior: strategic politeness. By avoiding aggressive language even in situations where "letting off steam" could be enjoyable, users can credibly show their seriousness.

The analysis of about 140,000 interactions on *Twitter* aligns with these predictions about how ideological differences shape communication strategies. By combining theory and data, the research provides insights into the dynamics of social media debates and highlights the challenges of improving their quality. Well-meaning interventions, like promoting evidence-based arguments or discouraging aggression, might have unintended consequences if they fail to account for the complex motivations that drive user behavior.

(Based on the working paper "Political Debate on Social Media: Theory and Evidence" by Ole Jann, CERGE-EI, and Christoph Schottmüller, University of Cologne, 2024.)



As the ideological distance between *Twitter* users increases, so does the amount of profanity in their interactions. (Figure from the working paper; one dot represents 1,000 *Twitter* interactions.)