

# Phone communication spurs a cascading effect on social influence

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Social influence from phone communications is significant, reaching as far as four degrees of separation from the original caller, according to a new study from researchers at The University of Texas at Austin, who

developed a new framework to more precisely study the phenomenon.

The researchers created a framework that distinguishes between people behaving in similar ways because of peer influence or because they've sought out friends with similar behaviors and beliefs. It's an important distinction to make for marketing and public health agencies looking to effectively target communications and influence behavior.

Yan Leng, an assistant professor at the McCombs School of Business, and colleagues also devised a new tool that marketers can use to identify influencers: highly connected individuals who can start [phone](#) cascades.

The research is available online in advance in the journal *Information Systems Research*.

With Xiaowen Dong of the University of Oxford, Esteban Moro of the University of Madrid and Alex Pentland of the Massachusetts Institute of Technology, Leng tested the framework on [mobile phone data](#) collected in a small European country with a single mobile provider to show how [phone communications](#) affect people's decision to attend a cultural event.

The framework consists of three steps:

1. Identify people who initially adopt a behavior.
2. Use cellular phone data to build [communication](#) cascades, or diagrams of individuals who have direct phone calls or are indirectly connected with initial adopters.
3. Gather the following data: a) locations people visited, b) whether their friends eventually adopted the behavior, and c) characteristics of people's social networks, such as how connected they are to their networks.

People who had direct phone contact with initial event attendees were 87.61% more likely to end up later attending themselves compared with those who didn't receive a [phone call](#) from a contact. Those who were two tiers away (friends of friends) from an initial adopter were 68.65% more likely to attend if they received a call.

This effect persisted up to four degrees of separation, showing that even being indirectly connected to a past attendee through a communications network raises one's likelihood of future attendance. Third-tier contacts were 53% more likely to go to the show and fourth tier 47% more likely.

While the researchers lacked details about the context of phone calls, they assumed the topic of communications within 24 hours of the event would include talk about the performance.

"And if people weren't talking about the event, then our estimate is an underestimate," Leng said. "Our findings on the long-range effect of [social influence](#) still hold."

The researchers used their results to build a new tool, their so-called influence centrality, that shows which people spread information more than others. This is important information that can be used in targeting in marketing, as it could help companies and public agencies promote new products and behaviors.

Businesses that have a new product they want people to adopt can use the framework and tool, too. For instance, companies sending out sample products to influencers are better off if they know who will most effectively spread the word. Overall, the research shows that despite the preponderance of social media, phones still matter for marketers.

"Phone communication is still a very important channel researchers should study," Leng said.

**More information:** Long-Range Social Influence in Phone Communication Networks on Offline Adoption Decisions, *Information Systems Research* (2023). [DOI: 10.1287/isre.2023.1231](https://doi.org/10.1287/isre.2023.1231)

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