Beyond social networks: How cultural beliefs really spread

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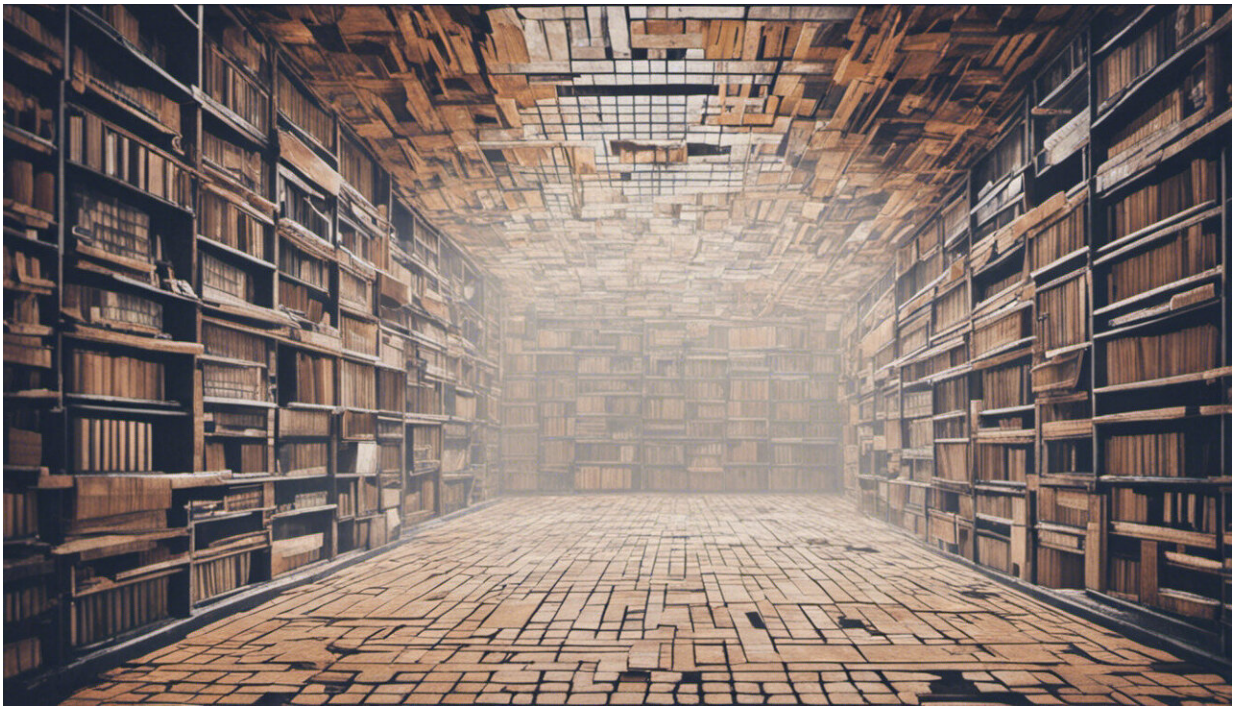

Credit: AI-generated image (disclaimer)

When Amir Goldberg had his first child a decade ago, he was bewildered to learn that some of his colleagues at Princeton University, where he was a doctoral student, weren't planning to vaccinate their offspring.

It seemed obvious to Goldberg that vaccines were crucial to protecting his daughter's health. Yet people who were similar to him—left-leaning, highly educated academics—had come to the opposite conclusion. They distrusted Big Pharma and thought that vaccines put their kids at risk of autism and other health problems. What accounted for the vast gulf between their beliefs and his?

Goldberg suspected that the explanation ran counter to a prominent theory among sociologists called social contagion. This model holds that beliefs and behaviors spread like a virus. They infect the people with whom one has the strongest ties, and the primary obstacles to their expansion are the boundaries dividing social groups.

But social contagion didn't adequately explain the anti-vaxxers. "We were passionately divergent about how we interpreted the same reality," Goldberg says, "yet the idea that we were in different networks was just incorrect."

The Role of Meaning

Goldberg, now an associate professor of organizational behavior at Stanford Graduate School of Business, came up with a new theory, which he calls associative diffusion, to explain cultural variation in contemporary societies. Influenced by insights from cognitive science, he and Sarah K. Stein, a Ph.D. student he advised, describe the model in a recent paper in the American Sociological Review.

The idea is this: When people are exposed to certain beliefs and behaviors, they don't just automatically "catch the bug." Rather, they receive information about which ideas and actions tend to go together. Networks do play a role, but people can pick up on signals from someone they follow on Twitter as easily as they can pick up on those from their parents. The way they interpret those social cues then

influences which behaviors they adopt.

"I learn appropriate social roles for particular categories of people, and I'm going to emulate people only as a function of whether I associate with their other attributes," Goldberg says.

While the social contagion theory assumes that the structure of networks is what determines varied preferences, associative diffusion argues that what matters most is the meaning people ascribe to the world around them.

For example, someone might notice that people who prefer home births and oppose genetically modified foods are against vaccinating their children. The observer learns that anti-vaxxing is associated with those health-related choices, and if she identifies with those, she may decide to update her behavior regarding vaccinations. (This is theoretical—Goldberg hasn't empirically studied vaccine naysayers.)

Goldberg and Stein backed up their theory with a mathematical formula that shows how individuals observing others at random eventually end up in an equilibrium of cultural variation. Competing theories do not result in a similar equilibrium, unless they assume that social groups are completely segregated.

To Change Minds, Change Associations

Goldberg's theory potentially explains a wide range of phenomena, from varying musical tastes to schoolyard cliques to the current polarization of American politics. For example, why do people who oppose gun control also tend to want to limit abortion rights, when those positions are not inherently linked by reason and are not often jointly subscribed to in other countries? "That's a cultural script in American politics," he says. "People learn from the environment that if you're a conservative, this is

what that implies."

Understanding how preferences and behaviors spread is important, Goldberg says, because signals about social identity—such as taste in food, dress, and music—have everything to do with access to power and opportunities. "Systemic cultural variation is also the way in which systemic inequality is sustained," he says.

Associative diffusion also holds lessons for how to change beliefs and behaviors, intractable as they may appear.

"The implication is that you have to change people's perception of the associations," Goldberg says. With smoking, for example, it took decades of public awareness campaigns for people to stop seeing cigarettes as symbols of rebellion and coolness and start viewing them as gross and unhealthy. Over time, similar shifts can happen with anti-vaxxing and political stances, too.

More information: Beyond "Social Contagion": Associative Diffusion and the Emergence of Cultural Variation. www.gsb.stanford.edu/faculty-r … n-emergence-cultural

Provided by Stanford University

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