The 25 percent tipping point for social change

For the last 50 years, social scientists have speculated that social change may come from the efforts of small, committed groups advocating for new social norms. For instance, in Rosabeth Moss Kanter's now-famous studies of sexism in the workplace in the 1970s, the Harvard Business School professor argued that if a certain number of women pushed for changes in workplace norms, then the entire culture of an organization could be changed. Similarly, studies of activism and social movements have argued that a small group of activists can change the culture of an entire community—for instance, about the legalization of marijuana or the acceptability of same-sex marriage.

In standard economic theory, classical stability analysis suggests that a population will only change its behavior if 51 percent of the group initiates the change—which makes the idea that a small minority can change the entire group's behavior a provocative scientific theory. Mathematicians and physicists have spent decades building theories that try to predict where the "tipping point" for social change might be. While there have been dozens of mathematical theories—all predicting different tipping points—none of these theories have ever been empirically tested. Consequently, while the tipping point is a provocative idea, there has never been concrete empirical evidence that they really exist.

Our study of tipping points, which was published last summer in the journal Science, attempted to solve this problem by first gathering insights from all of these past studies, and then using them to develop a new mathematical theory of tipping points in social change. Our theory predicted something new—that there would be a tipping point in the social norms as soon as an activist group reached approximately 25 percent of the population. Our study's main goal was to test our theory.

Testing the Theory

The difficulty with testing this kind of theory is that "history" only happens once. In other words, if an activist group fails, it is hard to know whether they would have succeeded if they had been just a little bigger. Similarly, if an activist group succeeds, it is hard to know whether they might have failed if something had been different. To understand what makes social change efforts succeed or fail—and whether there is, in fact, a "tipping point" for change—we need to be able to study many of these social change events side-by-side, so that we can measure whether small differences in the size of the committed group can, in fact, determine whether they succeed or fail.

To do this, we recruited 194 online participants and assigned each person to one of 10 different online communities that we created. In each community, members interacted in a social media network. Each community was similar in terms of the size of the group and the pattern of social ties between the members (which we controlled). The primary difference between the communities was that we varied the size of the activist group that tried to initiate social change. This enabled us to observe 10 different "possible worlds" and to determine whether slightly changing the size of the activist group might alter the social norms of the online communities.

The study had two parts. First, in each community, we asked people to talk with their fellow community members and come up with a new social norm regarding what names to use when referring to randomly pictured people. For instance, we showed a picture of a woman's face and asked people to agree on a name for her. Members interacted one-on-one with each other, exchanging their suggestions, trying to agree about what norm to use. At first, participants could not agree, as they proposed up to 50 or 60 different options. However, after a little while, each community reached a consensus.

Each of the 10 communities created a different social norm, but within each community, there was complete agreement. Once the norm was established in each community, we gave people financial incentives that encouraged them to keep using the established norm. This ensured that any attempts to change the norm would be resisted.

In part two of the study, once a social norm was established, we introduced an activist group into each of the communities. The activist group attempted to overturn the established norm by introducing a new name for the pictured face. For instance, if it was a picture of a man, the activists might start using a woman's name to refer to the pictured person.

We started small. For instance, in one community the activist group was only 17 percent. Then we made it larger—the next group had a committed minority of 19 percent. We kept increasing the activist group, all the way up to 21 percent. All of these activist groups failed to have any substantial impact on the community norms. Then, we increased the activist group to 25 percent. Instant success! There was a rapid, dramatic effect of the activist group on the behavior of the rest of the community. We replicated this several more times and found the same effects. Activist groups at or above 25 percent were able to change the social norms in their communities.

There are two big conclusions. First, tipping points really do exist. Second, if we know the properties of a social system, then we can identify where the tipping point for social change will be.

Moving to the Real World

One of the most interesting implications of these findings is that an activist group that is just below the tipping point would not know how close it is to success. A group that had reached 22 percent or 23 percent would be poised for success—however, it would look to the group members as if they had failed, since their effect on the population would not look very different from a small minority of only 10 percent.

However, our results show that by gaining a little more traction or bringing a few more people into the cause, a movement can have a rapid, dramatic impact on the culture of the entire population. In one case, we found that adding a single person to the activist group changed the committed minority from a complete failure (with no converts) to complete success (converting the entire group)! In other words, a movement that appears to be failure may actually be right at the cusp of success.

We have recently witnessed the power of social media networks, such as Twitter and “Democracia Real YA” to act as conduits for the growth of social activism, such as Occupy Wall Street and the Indignados Movement. Our results show how these activist groups may initially grow through a slow increase in numbers until they reach a critical point. At this point, their popularity and influence can explode, having a remarkable influence on the broader population. We have also seen this with #MeToo and Black Lives Matter. The implications here are that once groups reach the 25 percent tipping point, they can trigger a change in the rest of society.

There is also a dark side, however. The results from our study also show that these same kinds of tipping point dynamics can be exploited by governments and organizations trying to control people. For instance, in China, government employees create fake accounts within Chinese social media networks like Weibo and strategically coordinate with each other to influence the social norms in online discussion groups.

Highly connected online networks create more opportunities for people to interact with lots of people they may not know well—many of whom are strangers. In this kind of setting, it is easier for a government or a firm to put lots of actors into the social environment who collude with each other to influence the social norms of the group. In China, these actors—referred to as the 50 Cent Party—promote pro-China topics that celebrate the government. In work that I am doing now, we are examining whether these 50 Cent Party members ever reach the tipping point of 25 percent, at which point they can change the conversational norms on social media to dissuade people from discussing grievances with the government.

Similar kinds of changes in social conventions can be seen in social norms regarding civility or incivility in online discussions, bullying behavior in chat rooms, or the accepted style of discourse in political dialogue. If a critical mass of people engage in uncivil or aggressive behavior in these social settings, and the tipping point is reached, then others will adopt it, too, and these new norms of social discourse will spread to the majority of the population.

On a more positive note, one offline setting where these findings are particularly relevant is organizations. Within organizations, people are constantly interacting with a large number of people, many of whom are only casual acquaintances. In these interactions, everyone is trying to coordinate with one another without knowing much about who these other people are. Once social norms become established, they are reinforced by everyone. This is often referred to as the “culture” of a workplace. In these kinds of settings, a committed group of individuals who reaches the tipping point can effectively change the culture of an entire organization.

Building on the idea that originally inspired me—that is, Kanter’s idea that norms of sexism in corporations could be overturned if only a critical mass of women was reached—the good news from this study is that social norms are remarkably flexible, and big changes that eliminate sexism from office culture can be achieved even if the activists pushing for a change in workplace culture are in the minority.

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Publication

Experimental evidence for tipping points in social convention.
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