

# How Does Information Spread on Social Media Lead to Effective Change?

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## Abstract

Social media encompasses computer-mediated technologies that facilitate the creation and sharing of information, ideas, and other forms of expression via virtual communities and networks. The key, of course, is the ability and willingness for information to be shared. But why does some information spread on social media and not others? What factors translate social media awareness to action? In this article, we explore these themes using case studies, as well as tips on how you can utilize social media to effectively champion a cause.

## Keywords

- ▶ social media
- ▶ awareness
- ▶ virtual communities

## Ice Bucket Challenge

Human beings have flung themselves into bodies of ice-cold water in the name of charity for over a century, with events (polar bear plunges) dating back to at least 1904.<sup>1</sup> However, when Pete Frates, a former Boston College baseball player diagnosed with amyotrophic lateral sclerosis (ALS) in 2011, issued a challenge on July 31, 2014, to some friends and NFL (National Football League) quarterbacks, Tom Brady and Matt Ryan,<sup>2</sup> little did one know the events that this would set in motion. The “Ice Bucket Challenge” stormed the nation in the summer of 2014, with more than 1.2 million videos on Facebook by August 13, and more than 2.2 million tweets on Twitter by August 17.<sup>3</sup> The rules of the challenge were simple: within 24 hours of being challenged, participants were to record a video of themselves pouring a bucket full of ice water over their heads, and nominating up to three other people to do the same. In one version of the challenge, participants were to donate \$10 if they poured water over their head, or donate \$100 if they did not.<sup>4</sup> Many chose to donate \$100 in addition to doing the challenge. On August 29, 2014, the ALS Association reported that total donations over the preceding month had exceeded \$100 million, in stark contrast to the \$19.4 million raised in the year 2013. On July 25, 2016, the ALS Association announced that in part due to donations raised from the Ice Bucket Challenge, investigators at the University of Massachusetts Medical School were able to identify a third gene that caused the disease.<sup>5</sup> Prior to the challenge, public awareness of ALS

was relatively limited, with only half of Americans ever having heard of the term. Afterward, awareness soared from 163,000 views to 2.89 million views on the English Wikipedia article on ALS, and a similar 18-fold increase in the Spanish and German versions as well.

Therefore, why did the campaign succeed? Many have theorized that competitiveness, social media pressure, low barriers to participate, and yes—narcissism—all played a role. Criticism of the campaign inevitably followed. Online interest and donations reverted to original levels in a matter of weeks. Only one in four participants mentioned the ALS charity in their videos, and only one in five mentioned a donation. The year following the challenge, the ALS Association raised less than 1% of donations as compared with the previous summer. The viral campaign that ignited a nation quickly burned out, leaving only trace embers of memories in its wake. This article seeks to examine how information on social media can rapidly spread or “go viral.”

## Tribes

From the dawn of time, people have congregated into social groups, whether they be religious, ethnic, political, or around activities. According to Godin, a group only needs two things to be a tribe: a shared interest and a way to communicate.<sup>6</sup> With the prevalence of the Internet, barriers such as geography, cost, and time have faded away. It is much easier to assemble into social media tribes worldwide, as finding

fellow tribe members can occur by virtual introduction, participating in conversations, or connecting around social campaigns. The ripple effect of a tweet or Facebook post can go well beyond our immediate circle of followers (→ Fig. 1), to reach wider audience networks than originally imagined. It is human nature to belong, to contribute, and to share our wisdom.

Take the individual at the center of the image in → Fig. 1, so-called tweeter zero. Say this individual makes a statement in the form of a tweet (140 characters) that is seen initially by three people, who identify with the statement and “retweet” it. This statement can now be seen by each of the retweeters followers. Therefore, for something initially seen by 3 people, within a very short period of time, is now seen by 13 (the individuals at the periphery in the figure). This same process can be continued among each person who retweets the message, with similar exponential increases in the number of people who can see/respond to the initial tweet. If retweeter 1, 2, or 3 has a massive number of followers, such as a celebrity or political figure, this dramatically increases the “virality” of the tweet. Such a response was seen in the Ice Bucket Challenge, as several high profile sports stars or celebrities were involved in the initial spread of the campaign. This is a simplified explanation of how information spreads on social media.

Social media has broken down the barriers, and made tribe entry second nature. Unfortunately, attention spans in the digital age are increasingly brief. People want connection and growth, but also need the feeling of doing something new. A void in leadership can quickly lead to disassembly of the original tribe, with quick reassembling into new tribes around the next great idea or campaign. The transient nature of gathering on social media may be reflective of shorter attention spans in the digital era, or in fact, an unmasking of our true human nature where superficial relationships are

the norm. Regardless, accounting for this behavior is crucial toward the sharing of information on social media. The new version of a tree falling in a forest that is unheard can indeed be “If a tweet or post is not acknowledged, was it ever worthwhile?”

Factors that influence the dissemination of information on social media that can subsequently lead to action include:

- The power of social norms, particularly the appeal of joining a social consensus and desire to conform to positive behavior (e.g., appearing to be charitable)
- Having a clear moral incentive to act
- Appetite for a “warm glow”: the positive emotional benefit derived from feeling compassionate
- Ability to shift from extrinsic incentives (outside social pressures) to intrinsic incentives (internalized to become a new personal norm for the individual).

Dr Sander van der Linden, a social psychologist at the University of Cambridge, has done extensive research on this new breed of viral activism, where the initial sharing of information on social media leads to successful online charity campaigns. He has derived the acronym SMART to outline his recipe for viral altruism: Social influences, Moral imperatives, Affective Reactions, Translational impact.<sup>6,7</sup> It is the last step—translational impact—that is often the biggest barrier in social media campaigns. The ease of sharing information pales in comparison to inspiring others to act. Extrinsic incentives such as competitions or network pressure may undermine one’s intrinsic motivation by eroding moral sentiment. It becomes less about “doing the right thing” and more about “joining the crowd.” Increasing meaningful engagement might actually require deliberately hindering the hyperviral nature at some point in the campaign to establish a stabilizing force. Campaigns that allow for the creation of a shared identity between the individual and the

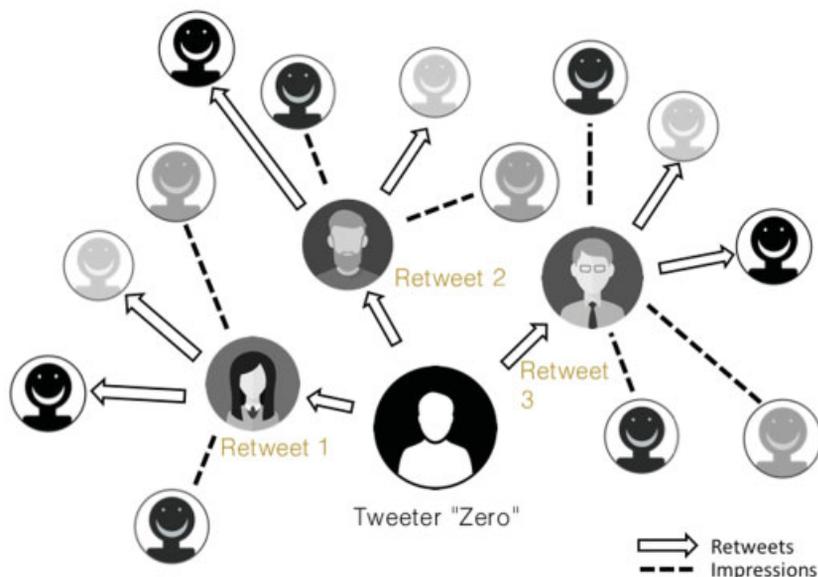


Fig. 1 Anatomy of a tweet—“ripple” effect from retweets and impressions.

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cause over time may lead to higher success in achieving translational impact. Social media is inherently social. A single click (or “touch” on a smartphone or other interactive device) is all that it takes to spread information. Acting on it, however, takes much more. As many societies and professionals have on their twitter profile, “retweets do not imply endorsement.” The instantaneous nature of social media allows information to spread rapidly, but the ability of this newly available information to change behavior is another issue entirely.

### New-Age Public Awareness Campaign: Strong for Surgery

It takes 15 to 17 years for findings from clinical trials to become incorporated into routine clinical practice.<sup>8,9</sup> This delay in implementing evidence-based best practices has sadly led to increased costs and adverse events for patients. Initiatives that can help overcome this barrier can be of positive benefit to all stakeholders in health care. The Strong for Surgery initiative was launched by the Surgical Care and Outcomes Assessment Program (SCOAP) collaborative in Washington in May 2012, targeting efforts to help optimize

patient health before elective surgery. Strong for Surgery incorporated a two-phase strategy as a platform for change—raising awareness through a public health campaign and changing practice with the use of implementation bundles that improved clinic workflow and incorporated the use of checklists on four areas—nutrition, blood sugar control, medications, and smoking cessation. A multimodality approach for public awareness was enacted through a combination of outreach events, strategic partnerships, and incorporation of digital strategies. A Web site was created ([www.StrongforSurgery.org](http://www.StrongforSurgery.org)), newsletters were emailed monthly, and social media engagement was done through Twitter and Facebook. After six pilot sites tested the Strong for Surgery platform in 2012, the program was spread to 11 SCOAP hospitals in year 2 and 21 SCOAP hospitals in year 3. Clinical effectiveness of the initiative was demonstrated in areas such as the reduction of prolonged length of stay and fewer adverse events after elective surgery.<sup>10</sup> In 2013 and 2014, 93 outreach events were conducted including invited presentations at Grand Rounds; panel discussions and presentations at regional and national meetings; and meetings with patient advocates. This however paled in comparison to the digital impact. Over a 2-year period of time, there were



**Fig. 2** Strong for Surgery: Comparison of in-person outreach events (stars) and social media engagement via Twitter (Twitter Birds) that led to requests to participate in the program.

16,227 hits to the Web site (11,473 unique views), and social media engagement leading to 186 U.S. requests to participate in the program outside Washington and from 13 countries around the world (►Fig. 2). Strong for Surgery in 2017 officially became a quality improvement program of the American College of Surgeons, with anticipated national and international growth in the years ahead. Institutions, individuals, and professional organizations were instrumental in getting the word out. Similar to the spread of information seen in ►Fig. 1, Strong for Surgery rapidly became a household name due to repeated efforts, simple to follow information, and a consistent message that had numerous stakeholders. The success of this campaign is being used by others as a model for how to change practice with global information dissemination in the digital age.

## Conclusion

Sharing information on social media is easy to do. Entry into tribes on social media can rapidly occur. The quest toward achieving sustained campaigns of significance via social media is often tricky, as the viral nature of the campaign can often serve as a deterrent to meaningful engagement. Employing methods that capitalize on viral altruism as well as utilizing stabilizing forces can be a mechanism that uses the best traits of social media to enact positive change. Time will tell whether future campaigns utilizing combinations of traditional outreach efforts and social media levers are able to lead to effective and sustained translational impact.

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