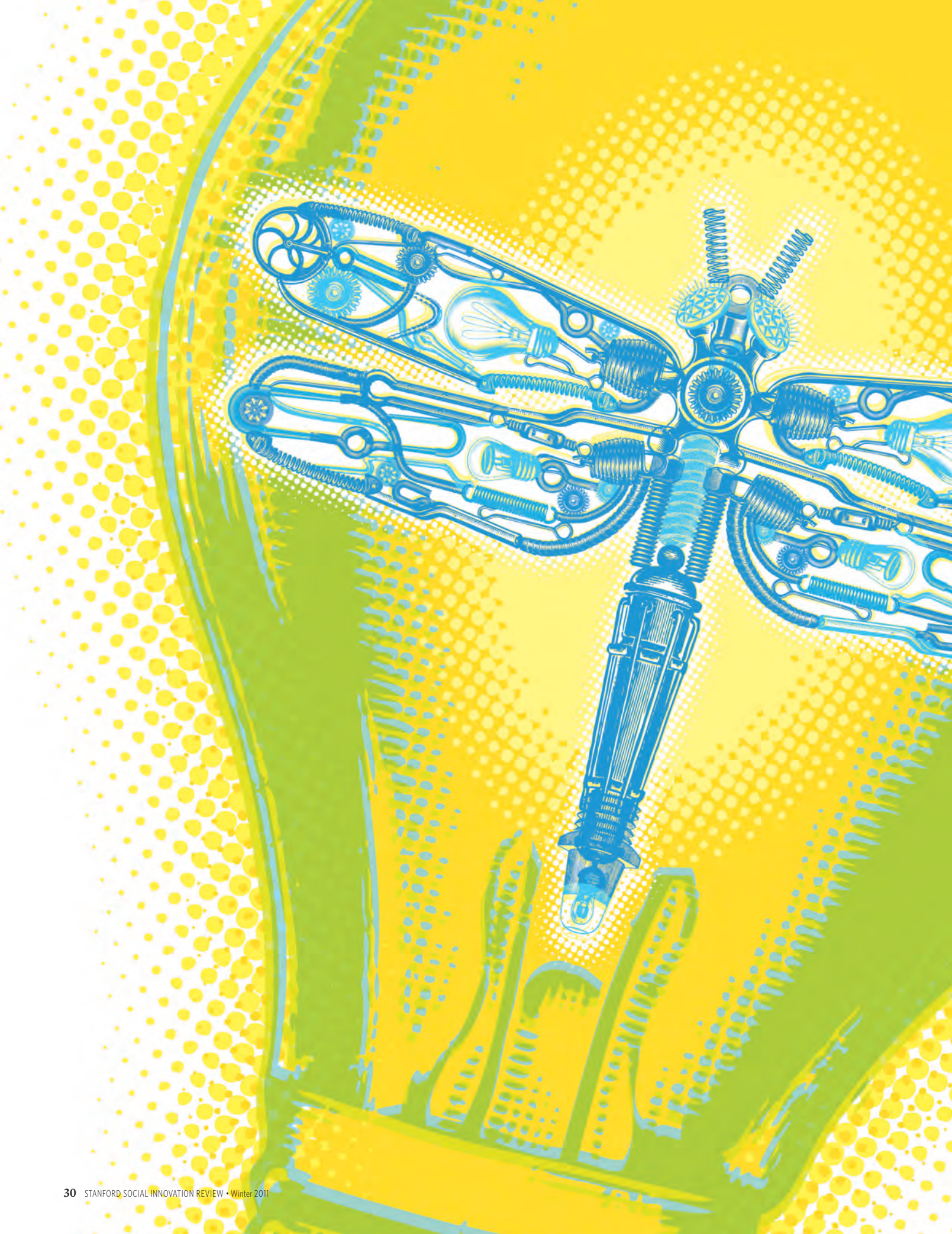


The Dragonfly Effect
By Jennifer Aaker & Andy Smith

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People are clamoring for ways to use social media for social change. Two veterans of consumer psychology, marketing, and entrepreneurship say there is a replicable framework to achieve this ambitious goal.

The Dragonfly Effect

BY JENNIFER AAKER & ANDY SMITH

Illustration by Carl Wiens

Sameer Bhatia was always good with numbers.

When he was in his 20s, the Stanford University grad came up with an innovative algorithm that formed the foundation of MonkeyBin, his popular consumer barter marketplace. By 31, the Silicon Valley entrepreneur was newly married and running a mobile gaming company.

Then, on a routine business trip to Mumbai, Bhatia started to feel under the weather. He lost his appetite and had trouble breathing. Bhatia chalked it up to the 100-degree weather and unbearable humidity. After a visit to a doctor at one of Mumbai's leading hospitals, however, blood tests showed that Bhatia's white blood cell count was wildly out of whack, and there were "blasts" in his cells. His doctor instructed him to return home to seek medical treatment. Upon entering the United States, Bhatia was admitted to the Robert Wood Johnson University Hospital in New Brunswick, N.J. He was diagnosed with Acute Myelogenous Leukemia (AML), a cancer that starts in the bone marrow and is characterized by the rapid growth of abnormal white blood cells that interfere with the production of normal blood cells. AML is the most common acute leukemia affecting adults.

Bhatia was facing the toughest challenge of his life. Half of all new cases of leukemia result in death. But Bhatia was determined to beat the odds and get better. After a few months of chemotherapy and other pharmacological treatment, doctors told Bhatia that his only remaining treatment option would be a bone marrow transplant—a procedure that requires finding a donor with marrow having the same human leukocyte antigens as the recipient.

Because tissue types are inherited, about 25 percent to 30 percent of patients are able to find a perfect match with a sibling. The remaining 70 percent must turn to the National Marrow Donor Program (NMDP), a national database with more than 8 million registered individuals.

Patients requiring a transplant are most likely to match a donor of their own ethnicity. That wasn't a promising scenario for Bhatia. He had a rare gene from his father's side of the family that proved extremely difficult to match. After typing his brother, his parents, and all of his cousins, the closest they got was a 2/8 match. Even more worrisome was that of the millions of registered donors in the NMDP, only 1.4 percent are South Asian. As a result, the odds of Bhatia finding a perfect match were 1 in 20,000. Worse, there were few other places to look. One would think that a match could be found easily in India, where Bhatia's family was originally from. But India does not have a national bone marrow registry. Not a single match surfaced anywhere.

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Bhatia's quest to find a donor match is a tale of the revolutionary power of social technology. Most of us are inundated daily with e-mails, videos, blog posts, and online invitations to participate in campaigns—pleas we generally ignore. Yet some social media-driven campaigns are so compelling that they beat incredible odds or cause millions to act. We call this phenomenon of using social technology for impact the "Dragonfly Effect." It is a method that coalesces the focal points of our careers—research and insights on consumer psychology and happiness with practical approaches for infectious action. The Dragonfly Effect is also an outgrowth of a class taught at the Stanford Graduate School of Business, which brought together students engaged in social media and an ecosystem of collaborators including Silicon Valley entrepreneurs, investors, and faculty and students from Stanford's Hasso Plattner Institute of Design. Not only did the class demonstrate that people are clamoring for ways to use social media for social good, but it also confirmed our belief that there is a replicable framework to achieve this goal.

Why the dragonfly? The dragonfly is the only insect able to propel itself in any direction when its four wings are working in concert. It symbolizes the importance of integrated effect and is akin to the ripple effect—a term used in economics, sociology, and psychology to indicate how small acts can create big change. To us, the Dragonfly Effect shows how synchronized ideas can be used to create rapid transformations through social media.

The method relies on four essential skills, or wings: 1) *focus*: identify a single concrete and measurable goal; 2) *grab attention*: cut through the noise of social media with something authentic and memorable; 3) *engage*: create a personal connection, accessing higher emotions, compassion, empathy, and happiness; and 4) *take action*: enable and empower others to take action. Throughout this process, we use the tools of design thinking, a creative approach to experimenting with and building up ideas.¹ Design thinking meshes with the Dragonfly method because it quickly takes people through a series of steps, starting with empathy and moving to hypothesis creation and then to rapid prototyping and testing.

WING 1: Focus Your Goal

Bhatia's circle of friends, a group of young entrepreneurs and professionals, reacted to the news of his diagnosis with an unconventional approach. "We realized our choices were between doing something, anything, and doing something seismic," says Robert Chatwani, Bhatia's best friend and business partner. The friends decided they would attack Bhatia's illness as they would any business challenge. It came down to running the numbers. If they campaigned for Bhatia and held bone marrow drives throughout the country, they could increase the number of South Asians in the registry. The only challenge was that to play the odds they had to register 20,000 South

Asians. They figured that this was the only way to find the match that would save his life. The only problem: Doctors told them that they had a matter of weeks to get the job done.

Bhatia's friends and family (Team Sameer) needed to work fast and they needed to scale up. Their strategy: tap the power of the Internet and focus on the tight-knit South Asian community to get 20,000 South Asians into the bone marrow registry, immediately. One of Chatwani's first steps was to write an e-mail with a clear call to action. In the message, he did not ask for help; he simply told people what was needed of them.

Dear Friends,

Please take a moment to read this email. My friend, Sameer Bhatia, has been diagnosed with acute myelogenous leukemia (AML), which is a cancer of the blood. He is in urgent need of a bone marrow transplant. Sameer is a Silicon Valley entrepreneur, is 31 years old, and got married last year. His diagnosis was confirmed just weeks ago and caught us all by surprise given that he has always been in peak condition.

Sameer, a Stanford alum, is known to many for his efforts in launching the American India Foundation, Project Dosti, TIE (Chicago), a microfinance fund, and other causes focused on helping others. Now he urgently needs our help in giving him a new lease on life. *He is undergoing chemotherapy at present but needs a bone marrow transplant to sustain beyond the next few months.*

Fortunately, you can help. Let's use the power of the Net to save a life.²

Robert then instructed readers to do three things. First, he urged them to get registered through a simple cheek swab test. He gave a link to locations where this could be done. Second, he told readers to spread the word. Third, he instructed people to learn more by visiting the website set up to help Bhatia. On it were more details on how to organize one's own drive and information about AML, plus frequently asked questions on registering. Robert sent the e-mail to Bhatia's closest friends and business colleagues—about 400 to 500 people, including fellow entrepreneurs, investors, South Asian relatives, and college friends. And that set of friends forwarded the e-mail to their personal networks, and so on. Within 48 hours, the e-mail had reached 35,000 people.

Bhatia's friends soon learned that yet another man in their ecosystem had recently been diagnosed with the same disease—Vinay Chakravarthy, a Boston-based 28-year-old physician. Bhatia's friends immediately partnered with Team Vinay, an inspiring group of people who shared the same goal as Team Sameer. Together, they harnessed Web 2.0 social media platforms and services like Facebook, Google Apps, and YouTube to collectively campaign and hold bone marrow drives all over the country.

Their goal was clear and their campaign was under way. Within weeks, in addition to the national drives, Team Sameer and Team Vinay coordinated bone marrow drives at more than 15 San Francisco Bay Area companies, including Cisco, Google, Intel, Oracle, eBay, PayPal, Yahoo, and Genentech. Volunteers on the East Coast started using the documents and collateral that the teams developed. After 11 weeks of focused efforts that included 480 bone marrow drives, 24,611 new people were registered. The teams recruited 3,500 volunteers, achieved more than 1 million media impressions, and garnered 150,000 visitors to the websites. "This is the biggest campaign we've ever been involved with," says Asia Blume of the

Asian American Donor Program. "Other patients might register maybe a thousand donors. We never imagined that this campaign would blow up to this extent."

Perhaps the most critical result associated with the campaign, however, was the discovery of two matches: one for Bhatia, one for Chakravarthy. In August 2007—only a few months after the kickoff of the campaign—Chakravarthy found a close match. Two weeks later, Bhatia was notified of the discovery of a perfect 10 of 10 match. Judging from the timing of when the donors entered the database, both Chakravarthy and Bhatia's matches were a direct result of the campaigns.

One of the main reasons Team Sameer succeeded was its ability to focus. They didn't get lost in the size of their challenge. They didn't try to sign up every single South Asian in the San Francisco Bay Area. Instead they focused on those who were well connected to others and who could relate to Bhatia and his story. Those types of people were easy to identify, and the scope of the challenge quickly came into focus. Perhaps most incredible was that Team Sameer and Team Vinay did not stop with just Bhatia and Chakravarthy. Ultimately, Team Sameer and Team Vinay educated a population about the value of becoming registered donors while changing the way registries work. Above all, they came up with a blueprint for saving lives—one that could be replicated.

WING 2: Grab Attention

Not every social media campaign can grab attention through life-or-death stories. Most need to impress through originality or take people by surprise. Consider the Coca-Cola Co. In 2009 the company was looking for a new way to connect to young consumers. Spending on traditional media or Super Bowl ads would be predictable. Instead, they veered far from what could have been anticipated and delivered the "Happiness Machine." Just before final exams, Coke installed a vending machine in a cafeteria at St. John's University in Queens, N.Y. Instead of dispensing normal sodas, however, the machine dispensed surprises. When a student paid for one Coke, she got many Cokes ... and then got other treats as well: flowers, a pizza, balloon animals, and even a 10-foot sandwich.

The students in the cafeteria were delighted by the surprises, which brought out the best in them. They shared the treats with fellow students. Coke posted a video on YouTube and advertised it with a single tweet: "Would you like a Coca-Cola Happiness Machine? Share the happiness ... share the video."³ Within two weeks, the video had been watched 2 million times. Although traditional Coke ads, such as those placed on *American Idol*, would gain greater reach, Coke's initial data suggest that the Happiness Machine has had a more meaningful impact on consumers. Coke spent less than \$50,000 on the video and proved the power of surprise as a tool to establish a deep emotional connection.

Or consider Nike, which in early 2010 partnered with social marketer (RED) to launch the (RED) laces campaign on World AIDS Day. Nike created eye-catching (RED) shoelaces, donating 100 percent of the sale proceeds to fight AIDS. Working with Twitter, they put an item on the Twitter homepage promoting the movement and

turned the text of all tweets red that included the hashtag #red or #laceupsavelives.⁴ To ignite the Twitter community, they enlisted celebrities such as Serena Williams, John Legend, Ashton Kutcher, and Chris Rock to send the following tweet (or their own variation): “Today is World AIDS Day. Together we can fight AIDS thru sports, www.nikefootball.com/red #red #laceupsavelives.” Nike essentially staged a virtual flashmob with the help of these influencers who were connected to millions of people. Within one day, they reached more than 10 million people with their message, turned more than a half million tweets red through the use of the promotion’s hashtags, and made World AIDS Day a top five global trending topic on Twitter, driving sales of the (RED) laces and ensuring further reach well beyond the followers of a particular set of influencers.

When working to grab attention in a social media campaign, we suggest four design principles: 1) *personal*: create with a personal hook in mind; 2) *unexpected*: people like consuming and then sharing new information—draw them in by piquing their curiosity; 3) *visual*: show, don’t tell—photos and videos speak millions of words; and 4) *visceral*: design the campaign so it triggers the senses through sight, sound, hearing, or taste.

WING 3: Engage

If Wing 2 of the Dragonfly Effect is about getting people to notice your cause, Wing 3, Engage, is about what happens next—compelling people to care deeply. Engage is arguably the most challenging of the four wings, because engaging others is more of an art than a science. Engagement has little to do with logic or reason. You might have brilliant arguments to explain why people should get involved, but if you can’t engage them emotionally, they won’t be swayed.

Barack Obama’s 2008 run for the White House is perhaps the broadest campaign to successfully use social media for social change. Obama’s team effectively used new social media tools—and according to some experts, this bold move secured him the presidency. Analysts at Edelman Research say that Obama won by “converting everyday people into engaged and empowered volunteers, donors, and advocates through social networks, e-mail advocacy, text messaging, and online video.”⁵

Although Obama’s grassroots effort was savvy at using a wide variety of existing social media and technology tools, its central channel was My.BarackObama.com (nicknamed MyBO). In many ways this easy-to-use networking website was like a more focused version of Facebook. It allowed Obama supporters to create a profile, build groups, connect, and chat with other registered users, find or plan offline events, and raise funds. MyBO also housed such user-generated content as videos, speeches, photos, and how-to guides that

allowed people to create their own content—similar to a digital toolbox. The mission, design, and execution of the site echoed the single goal of the grassroots effort: to provide a variety of ways for people to connect and become involved.

The Obama team, which created the most robust set of online tools ever used in a political campaign, did so in less than 10 days, timing the site to launch around Obama’s presidential campaign announcement. Keeping focused on one clear mission (“involvement through empowerment”) helped them not only to execute fast but also to execute right. In its core functionality, MyBO was the same on launch day as it was on Election Day.

It was no coincidence that MyBO shared similarities with Facebook; the Obama campaign had familiarized itself with Facebook early on, first using it before the midterm elections. At that time, Facebook had just started to allow political candidates to build profile pages, and even though Obama wasn’t a midterm candidate, he still wanted to harness online momentum. The campaign also hired Facebook co-founder Chris Hughes to help it develop and execute its social media strategy.

Hughes’s revolutionary contribution to MyBO was using social media not just to capture people’s attention but also to enable them to become activists (without a single field staffer telling them how). These activists became a team—initially gathering online and then coordinating offline events to evangelize their cause. MyBO integrated behavioral truths (involvement leads to commitment; opportunity leads to empowerment) and social media tools to inspire people to participate in ways that they found meaningful and rewarding. My.BarackObama.com was not merely a website; it was a movement that made politics accessible through social media that people were

THE DRAGONFLY EFFECT MODEL

	What is it?	Ultimate goal	How do you do it?	Reminder
WING ONE: Think Focused	Concentrate on a single outcome rather than “thinking big.”	To concentrate all of your resources and attention on achieving a single outcome.	<ul style="list-style-type: none"> ■ Set one goal. ■ Break it down into smaller, easily achievable sub-goals. ■ Establish metrics to measure success. ■ Create an action plan. ■ Be specific and concrete. ■ Be true to yourself. 	One goal, one person.
WING TWO: Grab Attention	Get noticed by your target audience.	To get people to pay attention to you and lay the foundation for engaging them.	<ul style="list-style-type: none"> ■ Be original. ■ Keep it simple. ■ Make it grounded. ■ Use visual imagery. 	What is your headline?
WING THREE: Engage	Get your target audience emotionally involved in your cause.	To “tee up” people to take action.	<ul style="list-style-type: none"> ■ Understand what engages people. ■ Tell a story. ■ Mix media. ■ Make it personal. 	What is your story?
WING FOUR: Take Action	Spur your audience to actually act on behalf of your cause.	To have your target audience volunteer time, money, or both to your cause.	<ul style="list-style-type: none"> ■ Make it easy. ■ Make it fun. ■ Promote idiosyncratic fits between contributors and requests for contributions. ■ Establish rapport with the target audience. ■ Provide immediate feedback, reflecting individuals’ contributions to your cause. 	What can someone do?

already using every day. It changed the face of political campaigns forever. But, more important, it made getting involved as easy as opening up an Internet browser and creating an online profile.

WING 4: Take Action

In many ways, Alex Scott was a regular kid. Her favorite food was French fries, her favorite color blue. She hoped to be a fashion designer one day. But in other ways, Scott was different. Just before her first birthday, she was diagnosed with neuroblastoma, an aggressive form of pediatric cancer. A tumor was removed from her back, and doctors told her parents, Liz and Jay Scott, that if she beat the cancer she would likely not walk again. Two weeks later Alex Scott moved her leg—one of the many early clues about her determination and capabilities. When Scott was 4, after receiving a stem cell transplant, she came up with a plan that would change how she and her family coped with cancer from then on. “When I get out of the hospital I want to have a lemonade stand,” she said. Scott wanted to use the money she made to fight cancer and help other children.

Her parents admit now that they laughed at Scott’s project. Although one in every 330 American children contracts cancer before age 20, childhood cancer research is consistently underfunded. Scott was advised that it could be challenging to raise money 50 cents at a time. “I don’t care. I’ll do it anyway,” she replied.

Like thousands of other junior entrepreneurs around the country, Scott set up a table in her front yard and started selling paper cups of lemonade to neighbors and passersby. Her hand-printed sign advertised that all proceeds would go to childhood cancer research. The 50-cent price of a glass of lemonade was ignored as customers paid with bills (\$1, \$5, \$10, and \$20) and allowed her to keep the change as a donation. Scott understood the importance of change management, and the change really added up.

Scott raised more than \$2,000 that first year. Her plan was far more than a social entrepreneur’s desire to earn profits for a purpose; rather, it empowered others to act for her cause. She reopened her stand for business each summer, and news of its existence and worthy cause spread far beyond her neighborhood, her town, and even her home state of Pennsylvania. She leveraged that momentum and got others to set up their own lemonade stands. Her approach was “sticky” in more ways than one.⁶ Before long, lemonade stand fundraisers took place in 50 states, plus Canada and France. Scott and her family appeared on *The Oprah Winfrey Show* as well as *The Today Show*.

Not one to be easily daunted, Scott set a goal to raise \$1 million for cancer research. By the time she reached \$700,000, Volvo of North America stepped in and pledged to hold a fundraising event to assure that the \$1 million goal would be reached.

Four years after setting up her first lemonade stand, Scott succumbed to cancer. She was 8. In her too-short life she raised \$1 million for cancer research, built awareness of the seriousness of childhood cancer, and taught a generation of children (and their parents) about the importance of abstract ideals like community and charity. She also demonstrated that making a difference can be fun.

To carry on Scott’s legacy, her parents established a nonprofit in her name, Alex’s Lemonade Stand Foundation (ALSF). Since its

founding, the 501(c)(3) charity has inspired more than 10,000 volunteers to set up more than 15,000 stands. It has raised in excess of \$27 million and donated to more than 100 research projects at nearly 50 institutions in the United States. Scott assembled a band of cancer-fighting evangelists (family, friends, neighbors, citizens, and corporations) that was far more powerful than anyone, even those closest to her, ever thought possible. At first, ALSF stayed connected to its constituents through two electronic newsletters, *Million Dollar Monday* and *Freshly Squeezed Friday News*, which included updates and anecdotes from lemonade stands around the country. No explicit appeal was made; they kept the news light and fun. But when ALSF started branching into social media, it found that the old rules didn’t apply. It engaged its community more directly and frequently through Twitter alerts and Facebook posts. With the help of social media—30,000 Twitter followers and 33,000 Facebook fans—the organization garnered a strong and faithful fan base, growing exponentially. ALSF also redeployed its experience to make it dead simple for anyone to hold a lemonade stand. Their site (www.alexlemonade.org) documents, down to the last detail, what one needs and includes downloadable templates and tools. The foundation sends everyone who registers a package of ALSF-branded materials, with banners, signs, posters, and flyers.

People all over the world took Scott’s idea and transformed it into a movement. The success of Alex’s Lemonade Stand Foundation wasn’t as much about raising money as it was inspiring people to take action. The organization recognized that traditional fundraising (dialing or dining for dollars) was a relatively passive act. By helping children around the country set up their own lemonade stands to fight childhood cancer, Scott mobilized a population of young ambassadors whose involvement and heightened awareness made a much more significant impact.

The organization embraced all four wings of the dragonfly: It focused on the goal to honor Scott’s wish to raise money to fight childhood cancer; it grabbed attention by tapping into a deep-rooted American tradition, the lemonade stand; it engaged people’s emotions by telling and retelling Scott’s compelling story. And finally, it excelled at the fourth wing of the Dragonfly Effect, Take Action, the wing critical to closing the loop on previous efforts.

Ultimately, the Dragonfly Effect demonstrates that one doesn’t need money or power to cause seismic social change. With energy, focus, and a good wireless connection, anything is possible. ■

This article is based on the book *The Dragonfly Effect* by Jennifer Aaker and Andy Smith (John Wiley & Sons, 2010).

Notes

- 1 For more on design thinking, see IDEO’s Human Centered Design Toolkit, 2009. Available at <http://www.ideo.com/work/featured/human-centered-design-toolkit>.
- 2 This e-mail is abbreviated; the full version can be found at <http://faculty-gsb.stanford.edu/aaker/pages/documents/UsingSocialMediaToSaveLives.pdf>.
- 3 To view the video, see http://www.youtube.com/watch?v=lqT_dPaj9U.
- 4 A hashtag is a short message using words or phrases prefixed with the hash symbol # that allows Twitter followers to search topic areas or current events.
- 5 Edelman Research, “The Social Pulpit: Barack Obama’s Social Media Toolkit,” 2009.
- 6 Stickiness refers to a quality that the most successful ideas and endeavors have: that of grabbing and holding attention. It’s a concept that grew to maturity during the dot-com era, fueled by Chip and Dan Heath’s bestselling book *Made to Stick: Why Some Ideas Survive and Others Die*, New York: Random House, 2007.