What are Likes Worth? A Facebook Field Experiment
Daniel Mochon, PhD, Karen Johnson, PhD, Janet Schwartz, PhD, and Dan Ariely, PhD

Pricing Strategies: The Difference of a Digit
Lingjiang Lora Tu, PhD and Chris Pullig, PhD

Boundary Conditions of Ethical Leadership: Stress as a Potential Inhibitor
Matthew J. Quade, PhD, Sara Jansen Perry, PhD, and Emily M. Hunter, PhD

Salesperson Ambidexterity and Customer Satisfaction
Raj Agnihotri, PhD, Colin B. Gabler, PhD, Omar S. Itani, PhD, Fernando Jaramillo, PhD, and Michael T. Krush, PhD

The Influence of Political Skill on Sales Outcomes
Jie Li, PhD, Gong Sun, PhD, and Zhiming Cheng, PhD

Maximizing Your Social Media Marketing
Kevin Pettit, MBA Candidate

INSIDER: When—The Scientific Secrets of Perfect Timing
Clint Ratliff, MBA Candidate

INSIDER: Sales Insanity
Jorge Trevino, MBA Candidate
What are Likes Worth? A Facebook Field Experiment
Daniel Mochon, PhD, Karen Johnson, PhD, Janet Schwartz, PhD, and Dan Ariely, PhD

Today’s businesses are devoting increasingly larger portions of their marketing budgets to social media. In fact, a recent survey revealed that marketers expect to spend about 10% of their budget on social media in the coming year and expect that number to double over the next five years. In this growing social media marketing landscape, interacting with customers on Facebook is at the forefront of businesses’ higher spending. However, despite the social reach and power of the social media giant and the tremendous resources businesses allocate to marketing through Facebook, businesses are not always able to understand or quantify the effects of Facebook marketing once customers log off of Facebook. In other words, little is known about whether Facebook page likes and content are really driving customers to engage and spend more offline.

Facebook pages enable both customer-initiated social interactions (word of mouth) and firm-initiated promotional communications (advertising). When functioning as an advertising platform, Facebook pages are just like most paid online advertising platforms where businesses post promotions and information to the news feeds of customers who follow their page. Businesses can further the reach of these posts by paying to put them on customers’ newsfeeds. Facebook pages can also function as an online word-of-mouth platform where customers themselves initiate interactions (likes, shares, comments) with the brand and other customers, and as they do this, they generate buzz that spreads organically through the social network. Research shows that both paid advertising and organic word of mouth can be effective and lead to increases in sales and repeat purchasing.

These similarities aside, marketing through Facebook pages also differs from traditional advertising and word of mouth in some important ways. Most notably, it relies on garnering coveted Facebook “likes,” where customers first opt-in to receive a brand’s promotional content by liking its page. This means that customers who like a brand are a self-selected group who may have been more likely to engage with the brand anyway. That is, we cannot tell whether liking the Facebook page causes greater engagement or greater engagement causes people to like the brand’s page. To answer this crucial question, we set out to test the value of a like by inviting a
random subset of a brand’s newest customers to like their Facebook page and then tracked their offline behavior. This allowed us to see whether a brand’s fans behave differently depending on whether they like the Facebook page. Second, we explored whether newly acquired page followers were changing their behavior because of the effect of word-of-mouth or traditional advertising.

In collaboration with Discovery Vitality, an incentive-based health and wellness program offered by the private health insurer Discovery Health, we developed a simple experimental method that measured the effect of acquired Facebook page likes (i.e., page likes solicited by the firm) on customer behavior. At the same time, our experiment leveraged Facebook’s content filter to test how the content was reaching customers. Our results showed that inviting customers to like Vitality’s Facebook page increased their brand engagement offline—customers who were invited to like Vitality’s page were more likely to do healthy things that earned them Vitality points than customers who were not invited to like the page. We also found that likes were most effective when Vitality paid to boost their Facebook page posts. That is, Facebook marketing works better as a platform for paid advertising than online word of mouth.

Our Study

We ran our study in collaboration with Discovery Vitality, a wellness program whose structure is similar to that of loyalty programs. Vitality customers earn points for healthy behaviors, and an accumulation of points leads to higher status levels, which, in turn, lead to greater benefits and rewards. Discovery Vitality’s Facebook page was designed to create a community around the Vitality program by promoting healthy behaviors, and thus increasing engagement and loyalty.

We targeted brand new Vitality customers because they were less likely to have already liked the Vitality Facebook page and might be open to an invitation. We sent an email to new customers inviting them to complete an online survey about the relationship between Facebook and health behavior. At the end of the survey, we randomly selected some of the participants to receive an invitation to like this page. This basic A/B test allowed us to compare the Vitality points activity of customers in the treatment condition who were invited to like the Vitality Facebook page to customers in the control condition who were not invited to like the Vitality Facebook page. Customers who liked the page were exposed to Vitality’s Facebook page content and could interact with it whenever they logged in to Facebook, exactly as they would with any other page they liked.

Our study consisted of a six-month experiment. During the first four months of the experiment, Vitality simply posted their Facebook content and let customers do the rest. During the last two months of the experiment, Vitality paid to boost two posts per week. In addition to testing whether Vitality customers who liked the page were more active than those who did not like the page, this design allowed us to see whether Facebook liking influenced people via word of mouth or advertising.
Our Findings

Most of the customers we invited to like the Facebook page went on to do so. The invitation was particularly appealing to new customers who were relatively active on Facebook and involved in the Vitality Program. We also found that customers were sensitive to how we framed the invitation to like the Facebook page. Vitality’s newest customers were more likely to accept our invitation to like their Facebook page when the message focused on not missing out on valuable Vitality program rewards.

Overall, when we compared the Vitality points activity of the treatment group to the control group, we found that those who were invited to like the Facebook page showed an 8% increase in monthly Vitality points activity over those in the control group. We also found that the increase in customer activity was specifically due to advertising and not word of mouth. That is, liking Vitality’s Facebook page only increased customer engagement during the last two months of the study when Vitality paid to boost two posts per week. During the first four months, customer engagement did not generate enough word of mouth to show an overall increase in points activity.

Implications

The fact that the majority of Vitality’s customers agreed to like the page in response to a simple request suggests that our methodology is viable for both initially acquiring Facebook likes and later measuring their impact on customer behavior. Our results also indicate how sensitive the liking process is to small descriptive changes to the invitation. Most importantly, our results show that acquired likes can translate into offline behavior change and that Facebook pages are most effective when used as a platform for firm-initiated promotional communications, that is, a form of traditional advertising rather than a platform for social interactions.

With regard to the effect of a like specifically, we found a large effect of page liking for low-involvement customers. That is, Facebook likes were especially effective at engaging customers who reported being relatively unengaged with the Vitality program prior to liking the page. We believe the reason why the information shared on Vitality’s Facebook page mainly affected low-involvement customers is that Facebook posts are typically targeted at a broad audience. Therefore, these posts contained general brand information, which highly involved customers were likely to already know but that low-involvement customers were not.
Furthermore, the effect of acquired page likes also depended on Facebook activity levels, with the strongest effect for the customers who were relatively less active on Facebook. This suggests the possibility that news feed clutter has become a real impediment to reaching customers. Those who spent more time on Facebook and also tended to like more pages, showed little to no effect of liking the firm’s page. This was true even when posts were boosted, which should be factored into budget considerations when estimating the cost to reach customers on Facebook.

Conclusion

Our methodology is easily applied as is. You or your brokerage can simply send e-mail invitations to a random subset of clients asking them to like your or your brokerage’s Facebook page, and then compare the behavior of the ‘invited’ group to the control non-invited one. Most importantly, do not assume that clients who have not previously liked your page are not interested in engaging with you on Facebook. A simple invitation to like the page is very likely to yield desirable results.

In conclusion, our research demonstrates that Facebook page likes are relatively easy to acquire and can cause a measurable and positive change in customers’ offline behavior. However, acquiring page likes does not guarantee increased brand engagement. You must pay for ongoing reach because Facebook pages are most effective when used as a platform for firm-initiated promotion communications—that is, when Facebook is treated as another traditional advertising platform. Therefore, our findings suggest that, as an agent, you should think of resources devoted to developing and managing a presence on Facebook much as you would any other traditional media tool in your marketing mix.

Recommended Reading


About the Authors

Daniel Mochon, PhD
Associate Professor of Marketing, Tulane University
Dr. Daniel Mochon’s (PhD – MIT) research focuses on understanding how the biases inherent to people’s decision-making processes affect their judgments and choices, and examining the practical implications of these biases for business and policy. His research spans many practical domains, including financial decision making, health, and online behavior. It has been published in top business and psychology journals such as *Management Science, The Journal of Marketing Research, The Journal of Consumer Research, The Journal of Consumer Psychology* and *Psychological Science*. His research has also been featured in various media outlets, such as *The Atlantic, Forbes, The New York Times, NPR, and Wired.*
Karen Johnson, PhD  
**Deputy General Manager, Discovery Vitality**  
Dr. Karen Johnson (PhD – University of Witwatersrand) has a clinical background as an RN with post-graduate qualifications in psychiatry, midwifery, and ICU. Her medical background, MBA, and 20 years’ experience in the health insurance and wellness industry has offered unique insights in this field. Her current interests lie in the health and wellness space, specifically behavioral economics and how behavior nudges and social influences affect health behaviors. Karen’s research on social media as a mechanism for affecting behavior change interrogated the interplay between real-world and digital-world behavior – looking at how interactions on social media platforms can influence real-life actions. Responsible for a range of strategic health and wellness outcomes at a leading wellness company in South Africa, Karen heads up the Strategic Program division in Vitality, which implements product and business innovations that promotes healthier living among Vitality members. This has contributed to the success of Vitality, which now reaches more than six million active members on five continents.

Janet Schwartz, PhD  
**Assistant Professor of Marketing, Tulane University**  
Dr. Janet Schwartz’s (PhD – Rutgers University) research is at the intersection of consumer behavior and public policy, where she uses insights from behavioral economics to investigate how consumers navigate the healthcare marketplace. She uses a variety of methods to understand health and healthcare as a consumer experience with the goal of better informing policy and improving consumer welfare. Dr. Schwartz’s research has been published in leading business, psychology and health policy journals including *Management Science, The Journal of Marketing Research, The Journal of Consumer Research, Psychological Science* and *Health Affairs*. Her work has been featured in media outlets such as *The New York Times, The New Yorker, Scientific American, The Atlantic, Wired, CNN,* and NPR.

Dan Ariely, PhD  
**James B. Duke Professor of Psychology and Behavioral Economics, Duke University**  
Dr. Dan Ariely (PhD – Duke University) is a founding member of the [Center for Advanced Hindsight](https://www.centerforadvancedhindisight.org) and conducts research in behavioral economics on the irrational ways people behave, described in plain language. His immersive introduction to irrationality took place as he overcame injuries sustained in an explosion. During a range of treatments in the burn department he faced a variety of irrational behaviors that were immensely painful and persistent. He began researching ways to better deliver painful and unavoidable treatments to patients. Ariely became engrossed with the idea that we repeatedly and predictably make the wrong decisions in many aspects of our lives and that research could help change some of these patterns. *Irrationally Yours, Predictably Irrational, The Upside of Irrationality, The (Honest) Truth About Dishonesty,* the movie Dishonesty, and the card game Irrational Game are his attempts to describe his research findings in non-academic terms, so that more people will discover the excitement of behavioral economics and use some of the insights to enrich their own lives.