



Lithium Technologies

Building Customer Networks for Successful Word of Mouth Marketing

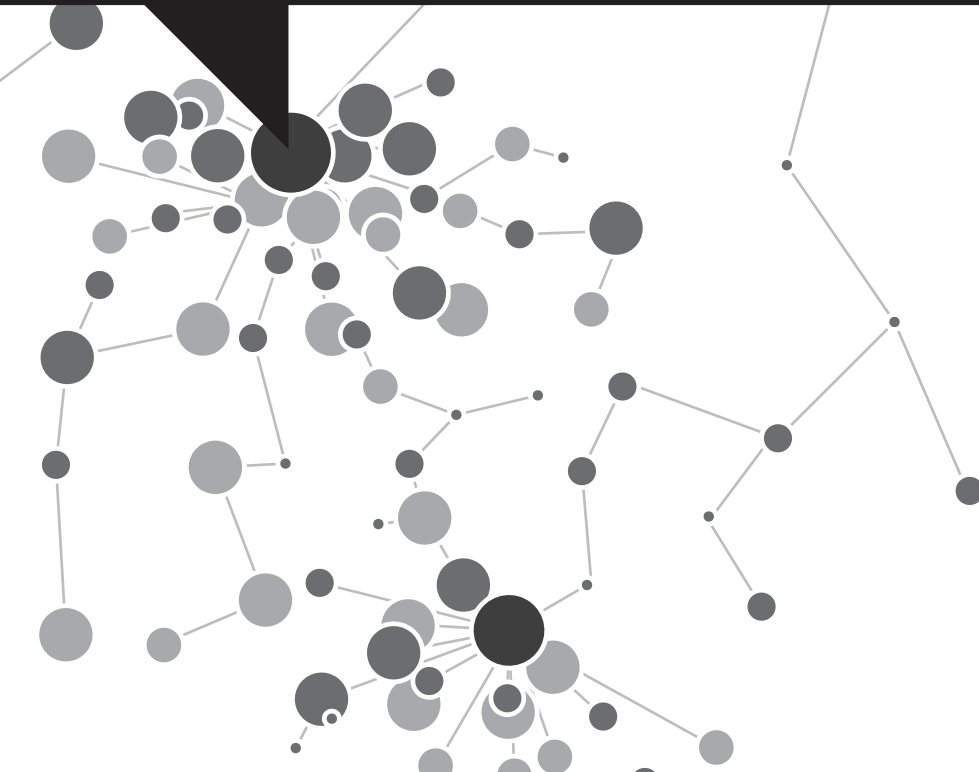


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Executive Summary

Generating word of mouth has always been the Holy Grail for marketers. A word of mouth marketing program depends upon the existence of a customer network — a set of interconnected relationships among members of a company's customer base. Practitioners and researchers have begun to quantify the behavior of these networks with word of mouth marketing in mind, and their models demonstrate that word of mouth campaigns can improve results in product adoption scenarios by as much as 107%. Other key implications for marketers include:

- **Influencers matter:** in customer networks, targeting influential customers as part of a word of mouth marketing program increases its effectiveness by as much as 50%.
- **Influencers speed sales:** in competitive markets, almost all of the value of word of mouth programs originates from accelerated product adoption. Targeted influencers create more value via acceleration than a randomly selected group.
- **Influencers maximize ROI:** companies can achieve more than 80% of the potential value of a seeding program by targeting fewer than 5% of the potential customers.

Customer communities enable companies to identify their most influential customers in two ways. Companies can use customer community platforms to collect rich behavioral profiles of users, sometimes referred to as “reputations,” that can help marketers understand how individual users' behavior impacts the community.

Social network analysis (SNA) can identify not merely the number of users a given member is connected to, but also the full extent and reach of their connections. Effectively, this represents a “Google PageRank™” for customers, enabling more precise and therefore more effective targeting of customers for word of mouth programs. Reputation and SNA complement each other to enhance the understanding of customer influencers in uniquely powerful ways.

Building on Lithium Technologies' previous research on community health, we find two vital social dynamics of customer communities that enable the propagation of word of mouth content:

- **Speed and closeness:** a community focused on a relatively narrow interest allows ideas to propagate faster, and creates enthusiasm through closer network ties.
- **Choice and echo:** customer communities are both socially diverse and interest-oriented. Ideas that propagate in a community of people who are heterogeneous, yet like-minded, gain strength through an echo chamber effect and appear more forcefully when they emerge into a wider audience.

The ability to attract, nurture, and retain influential customers is a core competitive advantage for savvy organizations. Vibrant customer communities are therefore vital tools, not only for their immediate benefits in member-driven support, promotion, and innovation, but as a means for attracting customers to act as influencers in future marketing campaigns.

Word of Mouth: Art and Science

Perhaps the most familiar illustration of word of mouth marketing comes from the 1970s TV commercial for Fabergé Organic Shampoo. In the commercial, a woman talks about how she loved the product, and she told two friends, and they told two friends, “And so on, and so on, and so on....” Meanwhile, the screen splits into ever more numerous images of young women sporting helmets of full-bodied, lustrous hair. The ad remains noteworthy because it neatly illustrates two aspects of word of mouth marketing: it is social, and it is mathematical.

Word of mouth marketing remains a Jekyll and Hyde discipline. On one hand, the success of word of mouth relies on a company, or its offerings, being compelling enough for customers to want to talk about them; on the other, word of mouth marketing is a social science which, to be most effective, requires a mathematically rigorous understanding of how customer networks propagate information.¹

In most organizations, however, the two sides of the discipline do not yet inform one another and are often in direct conflict. Now that online brand-oriented communities have become a necessity for many enterprises, this is about to change. The “art” of managing online communities, honed over the past few years by practitioners who have developed a deep, but anecdotal, understanding of the social dynamics that make those communities work, is meeting the “science” of measurement and analysis of those same communities.

The analysis of data developed over the past decade of experience with brand-oriented communities is giving rise to exciting new insights that will make word of mouth campaigns increasingly sophisticated. If the existence of a brand-oriented community is a baseline requirement for many organizations today, customer network analysis will become a critical discipline in the near future. Such analysis will enable organizations to answer questions like:

- Who are my most influential customers?
- Which customers will help me spread my brand message most quickly?
- What new customers are most likely to become influential?
- What is the optimal size for seeding a word of mouth marketing campaign?
- How long will it take for my product or service to reach peak rates of adoption?
- Are my most influential customers increasing or decreasing their affinity for my brand?
- What is the lifetime value of a customer, including influence value in my customer network?

Organizations making informed, data-driven decisions when addressing these questions will enjoy a considerable competitive advantage over those that do not. Organizations developing best practices for mobilizing influential customers will have a devastating competitive advantage. Indeed, socially-oriented marketing has become vital, not just to sell more products now, but as a means for attracting the customers most likely to be influential in the future. The competition to attract and nurture such customers is likely to be fierce.

In this white paper, we will discuss some of the latest research in word of mouth marketing, including research based on data sets developed by Lithium Technologies over the past ten years. We will marry that research to insights from practitioners and discuss the role of online communities in propagating word of mouth messaging. Finally, we will suggest some directions for the technology and practice of Social CRM — the discipline that is best positioned to advance word of mouth marketing programs in the enterprise.

Research: Analyzing Network Effects

Suppose the user of Fabergé Organic Shampoo (we'll call her Farrah) tells two friends about it, and they tell two friends, and they tell two more, and so on. The diffusion across this customer network is simple to compute using the powers of two. If this occurred 27 times, over 134,000,000 people would use Fabergé Organic Shampoo, representing the entire female population of the United States at the time the ad ran. After 31 times, every woman on earth would have followed Farrah's lead. The lifetime value of Farrah as a Fabergé customer would be astronomical.

Of course, in the real world, information and products do not diffuse in this way. Although the reasons may appear obvious, they are worth noting:

- Some people are more prone to talking about products than others. In fact, many customers won't tell anyone at all. Conversely, a small number of people will tell a lot of their friends. Many, however, won't tell anyone at all. And some may tell their friends, but not have any influence over them.
- People have friends in common. If Farrah tells Kate and Jaclyn about the shampoo, then Kate tells Jaclyn and Cheryl, Kate has not doubled the number of potential consumers because Jaclyn already knew about the shampoo. In practice most people's social networks overlap to a high degree with their friends.
- The market for shampoo is competitive. If there were only one brand of shampoo, everyone interested in shampoo would eventually find out about it, and Farrah's only impact would be to speed up the process. However, since people have other options, and incumbent brands have advantages, the potential diffusion of Fabergé Organic Shampoo becomes limited.

Recent research has helped us understand these factors better as they relate to existing customer networks. Increasingly, we can quantify these factors to help improve business decision making. The questions under study are of particular interest to marketers:

- In a word of mouth program, how much do individual influencers matter? If, for example, Farrah has a large number of connections but Kate has fewer, how much more valuable is Farrah as an influencer?
- How much do the structural characteristics of a customer network — for example, its size and the average degree of separation between members — matter to the outcome and overall value of a word of mouth program?
- How well do word of mouth programs work in the presence of competition? Is there a first mover advantage, and if so, how important is it? And how much does brand equity matter?

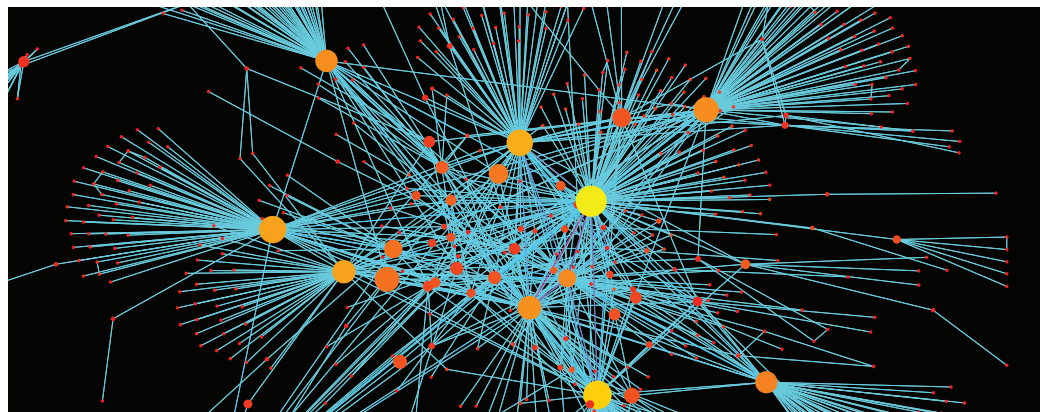
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To answer some of these questions, researchers used anonymized data from longstanding customer communities hosted by Lithium.² They developed an agent-based modeling technique that simulated interactions across a network while keeping relationships between members of the network accurate at the individual level. In other words, the diffusion of information was simulated using randomized variables, but the structure of the network (who connects to whom, and how strongly) mirrored life: if Farrah and Cheryl have no contact except through Jaclyn, this structure was held constant. The research measured the results of a product introduction and adoption model under different scenarios across all of the customer networks:

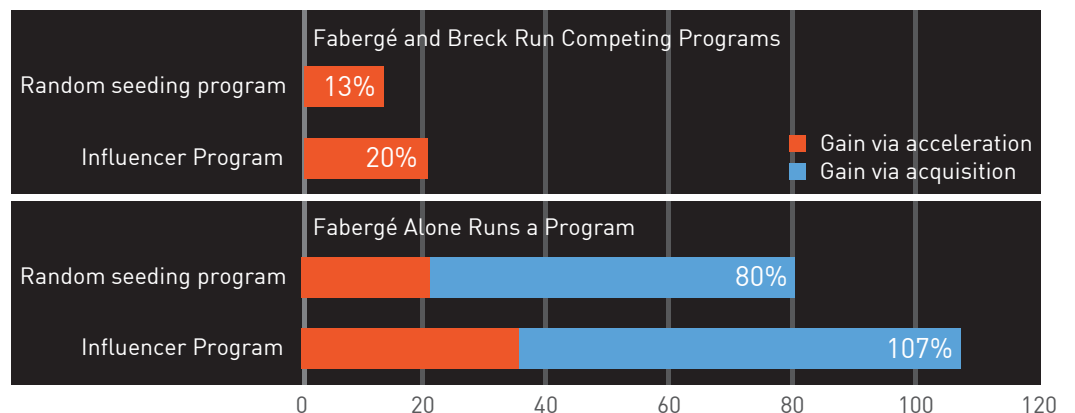
- **Influencer:** some scenarios began by reaching out to influential customers, others seeded customers at random;
- **External influence:** scenarios assumed different levels of influence by external forces such as advertisements or direct sales;
- **Brand equity:** scenarios assumed different levels of brand equity for the competing companies;
- **Program size:** word of mouth programs began with different size seeds.

A social graph of one of the networks in the study.



Imagine that there are two competitive shampoo brands: Fabergé and Breck. The following chart aggregates the results across six different customer networks (embodied by Lithium-hosted communities) in terms of gains to Fabergé compared with a scenario where Fabergé did not run a word-of-mouth marketing program:

Source of product adoption by customers



For marketers, the most important findings relate to the role of influencers:

- **Influencers matter:** targeting influential customers as part of a word of mouth marketing program can increase effectiveness by about 50%. Random seeding also creates value, but less and more slowly.
- **Influencers speed sales:** in perfectly competitive markets, almost 100% of the value of word of mouth programs comes from accelerating product adoption among people who would have adopted it anyway, rather than from acquiring new customers. The fact that the acceleration ratio is higher when influencers are at work suggests that influencers are particularly important in “land grab” scenarios where customers are unlikely to switch after making their initial selection.³
- **Influencers maximize ROI:** diminishing returns apply to seeding programs, and beyond a certain size they actually have a negative impact. Companies can achieve more than 80% of the potential value of a seeding program by targeting fewer than 5% of the potential audience. This increases the importance of selecting the right people to participate in the seeding program.⁴

Competition and Word of Mouth Programs

The implications from competitive scenarios are clear: if there is no competing word of mouth program, start one fast. If your competitor has a word of mouth program, hurry up.

By far the largest gains in the simulations occur when Fabergé runs a word of mouth program and Breck does not. In this case the gain to Fabergé is more than 107% across all of the networks if influencers are used to seed the program. If Breck gets into the mix, Fabergé’s gain is only about 20%. In both cases the incremental value of seeding with influencers is substantial: about 33% effectiveness improvement for a one brand program, and a 50% improvement when both brands have a program.

Interestingly, stronger brands were found to benefit less overall from word of mouth marketing programs than weaker ones, and more of the benefits were found to come from acceleration effects rather than from customer acquisition. The implications of this for brands are particularly interesting. For a strong brand, a word of mouth marketing program is an important defensive maneuver. Since word of mouth programs are inexpensive relative to other forms of marketing, upstart brands are more likely to employ them. Incumbent brands can neutralize some of this effect simply by creating a program of their own. Upstart brands, on the other hand, can make headway at the strong brand’s expense if the strong brand does not have a competitive word of mouth program. For upstarts then, this suggests that there is tremendous first mover advantage.

Additional heartening news for upstart brands comes from the study’s findings on the effect of program size. Companies do not need to run large programs to be successful. In all word of mouth programs, the marginal value of an additional customer added to the seeding program goes down. This is true for two reasons: first, additional members will eventually influence people who would have adopted the product in any case; and second, seeding too many participants saturates the market and there is literally no one left to influence. While the ideal size of a program depends on the structural characteristics of the network — particularly how close members are to one another — companies can achieve approximately 80% of the potential value of a word of mouth program by seeding 5% of the members. They can optimize this further by choosing the right members. If influencers have already been identified, the most cost effective strategy is likely to be a small program targeted directly at them.

Customer Communities and Word of Mouth

Marketing practitioners have identified customer communities as a key element of word of mouth programs because communities give customers an easily observable place to congregate and talk.⁵ Given what we now know about the propagation of word of mouth, an equally important benefit of customer communities is their ability to identify influencers.

For marketers interested in gaining the word of mouth benefits of customer communities, it is important to understand ways that communities help identify their most influential customers. In addition, it is also important to recognize how communities function as social systems for propagating information. Incorrect understanding of the social dynamics of communities can result in mistakes that detract substantially from their value.

Communities and Influencers

Customer communities offer two powerful means for identifying influential customers: behavioral analysis and social network analysis.

Under the rubric of Lithium's "Reputation Engine," behavioral analysis has long been a cornerstone of successful customer communities. Using the reputation engine, community managers can reward socially beneficial behaviors by recognizing deserving users with increased privileges, access to VIP areas, special badges and avatars, and other perks. The reputation engine tracks several dozen behavioral factors, including members' propensity to post, the community's assessment of their contributions, how often they log in, how often they contribute to the community's knowledge base, and so on. Through the use of business rules, community managers can sort members into "ranks" that reflect their status in the community.

A member's community rank is a practical indicator of influence. As behavior drives rank, those with higher ranks tend to be long standing members, people who have invested more time in the community, and people whose opinions carry more weight with other members. Additionally as the ranking system is explicitly hierarchical, it promotes alignment with the community's norms, and demonstrates clearly that participation and adding value to the community are rewarded. Members promoted through the ranks frequently act as volunteer moderators. Both public and private communications between higher status members and new community members are a time-honored means of making new users feel included as well as enforcing discipline. By definition, in any healthy community, high status members are influential.

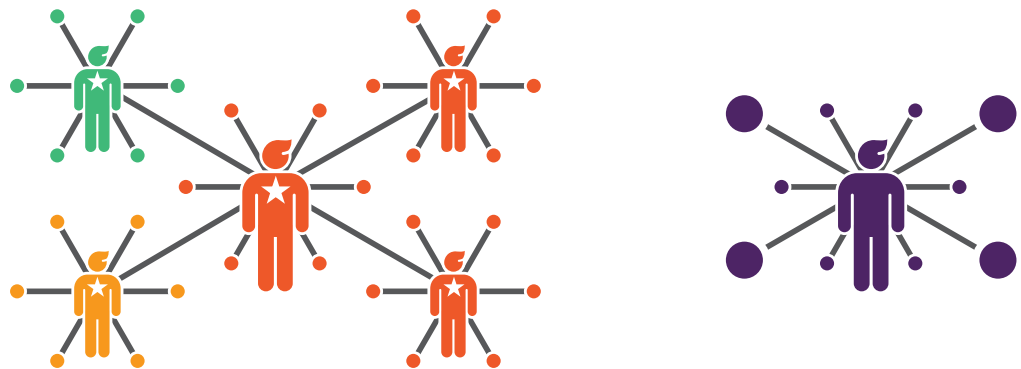
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A second means of identifying influential customers comes from Social Network Analysis (SNA). SNA measures the structure and function of the ties between members of a network. In the case of a customer community, SNA can help identify which members interact directly with other members, the level of “cliquishness” within the community so to speak, and the level of indirect influence a member might exert by virtue of his centrality in the network.

There are different measures of centrality in a social network, of which two are particularly important in online communities: degree centrality and eigenvector centrality. The two are illustrated here:

Eigenvector centrality (left), degree centrality (right).



Eigenvector centrality tends to measure influence more accurately than degree centrality. Using a familiar analogy, influential customers are like web sites with a high Google PageRank™, rather than those that are connected to many but obscure web pages.⁶ This is intuitive: people who have a lot of friends who are themselves popular, are likely to influence more people than those who have a lot of friends who are reclusive.

If influence is the channel through which word of mouth flows in customer networks, a community is the medium. Not all communities, however, are equally suited for word of mouth — and using an unhealthy community for a word of mouth marketing campaign might have unfortunate consequences. A quantitative and qualitative understanding of how communities propagate ideas becomes imperative word of mouth marketers.

Health, Time, and Distance

Fortunately, we can measure the health of the medium. In early 2009, Lithium created the Community Health Index, a six-factored approach for measuring the well-being of an online community. We found three factors in particular to be predictive — they are, in other words, leading indicators for the growth of the community in the future. Those indicators are:

- **Responsiveness:** the speed with which a community responds to a new post;
- **Interaction:** the number of unique users involved in a community’s discussions;
- **Liveliness:** the amount of visible activity in public areas of the community.⁷

When we created these measures, we initially speculated they would be shown to impact not just the health of the community, but the success of the community in achieving business objectives. Recent research has shown that the first two of these factors (responsiveness and interaction) are also related to the propagation of word of mouth messaging. In short, a healthy community is also one that can successfully propagate ideas.

Building Customer Networks for Successful Word of Mouth Marketing



In a customer community, members are closer together and share common interests, speeding the transmission of enthusiasm.



In the world at large, people with common interests are further separated, which diminishes the transmission of enthusiasm.

Healthy communities successfully propagate ideas because they conquer two related problems encompassed by the responsiveness and interaction metrics: time and distance.

Time matters because ideas get stale. In their study of the growth and decay of popular stories on Digg.com, Bernardo Huberman and Fang Wu showed that the growth and decay of users' attention can be described by a single novelty factor that determines the time scale over which attention fades.⁸ Since enthusiasm decays naturally over time, slow responsiveness in a community directly impacts the ability of members to transmit their enthusiasm. A responsive community, on the other hand, creates a hothouse atmosphere where the decay happens more slowly than it would in a larger market — particularly where there is more competition for attention. Initially, enthusiastic members communicate their feelings, which are taken up by others, who cause the initially enthusiastic members to respond, thereby maintaining the signal strength.⁹

Without interest-oriented communities to reinforce and amplify enthusiasm, the relentless pressure of novelty forces ideas off of the front page, both literally and figuratively, increasing the challenge for word of mouth marketers.

Distance, on the other hand, matters because enthusiasm wanes in a network if users can't pass it on. A healthy community with a high level of interaction has many different members who are connected by participation in common discussions. In other words, in such communities, members tend to be "close" to one another in terms of the average number of "degrees of separation" between members of the network. Simulations of information diffusion conducted by Andrew Stephen and Jonah Berger demonstrate that this "closeness" in the network is more important in word of mouth transmission than the absolute number of a member's connections in the network. This is why eigenvector centrality is a more meaningful indicator of potential influence than degree centrality.¹⁰

Since customer communities consist largely of people who share an enthusiasm for a product or service, they contain a high density of people who want to discuss an idea. This density of people, particularly in a healthy community, helps overcome the barriers imposed by time and distance, creating an environment conducive to propagating users' enthusiasm. But what happens to ideas inside of communities? How do they change through word of mouth? Whose behavior do they influence? And what happens when ideas emerge from the community into the personal social networks of members?

The Community Echo Chamber Effect: A Choice and an Echo

Marketers who are hoping that "word of mouth" means simple repetition of their own talking points should steer clear of communities. Communities do act as an echo chamber, but not in the conventional way.

The phrase "echo chamber" is often used in a negative sense to describe a situation where groupthink prevails: people speak only to others who share their ideas, leading participants to believe that these ideas are both true and widely shared. Once released into a broader marketplace, ideas conceived in such an echo chamber are thought to sputter and fail quickly. Analysis of idea propagation within online communities, however, tells a more interesting story.

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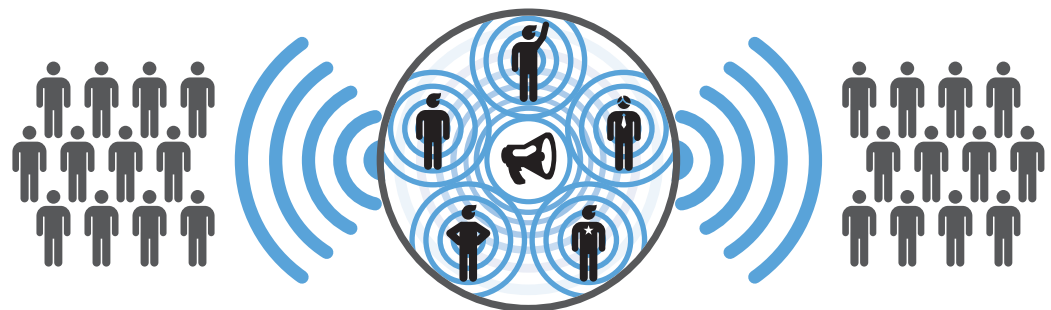


Customer communities unite users who share a common interest in a business's products or services. As a result, community members are exposed to more information about the host company's products and services than about those of competitors'. The sense of in-group identification that comes from being a member of a customer community has been shown in studies to increase the likelihood of members adopting a company's products, as well as the likelihood that they will look skeptically upon the merits of competing offerings. In a controlled experiment using eBay's customer community, René Alegesheimer and Paul Dholakia found that both active participants and lurkers purchased more than non-community members.¹¹ Customer communities thus offer an undeniable "home field advantage" for the propagation of word of mouth messaging and new products.¹²

However, recent research has shown that online communities influence users' ideas and behavior not because they act as simple echo chambers, but rather because they allow ideas to be questioned, tested, and augmented. Ideas are thereby strengthened in the presence of an audience that is socially heterogeneous, yet relatively uniform in its interests. For instance, in their recent study of online community behavior, Kristin de Valck and her co-authors find that the negotiation of community norms and ideals among members actually strengthens the value of the community as a reference group. Since participation in online communities is a purely voluntary activity undertaken largely by people who do not otherwise know one another, many people join precisely because they are looking for new information or perspectives, and community participation gives them more of a stake in the results. Norm-setting behavior by influential users is therefore particularly powerful in online communities because many people are actively seeking to be influenced. They are eager recipients of word of mouth information.¹³

The recent emphasis on heterogeneity within communities confirms a maxim that community practitioners have long understood: successful communities rely upon a mixture of user types. Practitioners and analysts have segmented the online population differently. Josh Bernoff and Charlene Li use the terms creators, critics, collectors, joiners, spectators, and inactives.¹⁴ De Valck segments participants as core members, conversationalists, informationlists, hobbyists, functionalists, and opportunists. However one chooses to categorize the participants, it is clear that a community that drives word of mouth requires people who want to share information (commonly known as "superusers," "creators," or "core members") and people who want to learn.

The strength of an idea is enhanced by word of mouth transmission within a diverse community.



Heterogeneity is Your Friend: A Case Study

For word of mouth to jump most effectively from the community to a broader customer network, we would suggest that one role is particularly important: the debater. Debaters bring in outside perspectives, question the authority of the prevailing group, and cause defenders to become more active. Debaters can help prolong discussions, keeping enthusiasm building where it might otherwise wane. Most importantly perhaps, debaters force partisans to sharpen their rhetorical skills, improving the eventual quality of the content and making it more suitable for the broader web.

Redfin's community offers an instructive example. Redfin is an online real estate broker. It is an upstart brand facing stiff competition from incumbent real estate giants such as Century 21 as well as other real estate start-ups. Its marketing budget is only a tiny percentage of its largest competitors', and because its agents are salary-based rather than commission-based, they do not engage in direct marketing, as competitors' agents do. In other words, Redfin's marketing succeeds or fails by word of mouth.

To make matters more challenging, the nature of Redfin's product (real estate) is such that repeat buyers are sparse. Regardless of current economic conditions, few consumers purchase multiple houses. So a great deal of Redfin's word of mouth impact needs to come from people who are either not yet customers in the sense that they've completed a transaction, or from some other means.

Redfin's approach has been to encourage debate in its community. Interestingly some of the most influential users — in terms of connectedness to other users and rank — on Redfin's community are actually competing real estate agents. Others are potential customers who ultimately chose to use another brokerage. Yet the response to Redfin's community is overwhelmingly positive. Redfin's studies show that 51 percent of the people who bought a home through the service were influenced by the community in their decision to work with Redfin. Twenty-two percent of the buyers had posted a question to the community themselves.

Redfin's CEO Glenn Kelman maintains that, "An open community where anyone can agonize over what to offer on a listing or rant and rave about our service is the key to Redfin's credibility, and the only sustainable way to drive revenues." The presence of debate in Redfin's community serves as a motivator for its most fervent advocates. Even in a relatively small community, some discussions take place over weeks or months, keeping community members engaged. When members share information about Redfin, their information is detailed, precise, and finely tuned to the question at hand.

The results: Redfin's revenue grew 40% year over year in the worst market for real estate in 100 years, while the company reduced marketing expenses by 82%.

In short, marketers should not confuse the "echo chamber" effect of communities with dull repetition of their own messaging. The most successful word of mouth communities provide both a choice and an echo.

Where Art and Science Meet: Identifying and Nurturing Influencers

Analysis of word of mouth marketing theory and practice yields some practical advice for marketers using customer networks as part of a word of mouth strategy:

- **Measure and manage your influencers with care:** Whether you are actually seeding a word of mouth program using influencers, or you are developing a broader marketing strategy that embraces word of mouth, influencers are critical to your success. Social CRM software should help you in this endeavor;
- **Weigh the value of users' connections:** Users who have a large number of connections are not necessarily the most influential users. Measures of influence such as the absolute number of Twitter followers or Facebook friends are probably less important than a user's "closeness" to others in the network. Make sure the analytics you use can assess the value of connections rather than merely counting them. As a first step in measuring lifetime influence value, strive to have a "PageRank™" for each of your customers;
- **Pay attention to emerging members of your customer network:** New community members who visit repeatedly without posting often are among the most receptive to word of mouth messages. Give them every reason to feel welcome and valued, and encourage them to connect with others;
- **Follow Andy Sernovitz's first rule:** "Give people a reason to talk about your stuff." Creating conversation perpetuates enthusiasm, which is a scarce commodity in today's world. Even problems with your company's product or service represent opportunities to create conversations. Be wary of narrow functionalism that says, "This community is only for questions and answers, or only for technical support." Do not fear having "support" issues invade a community meant for enthusiasts, since the people you want to spread the word are people who like to share information;
- **Moderate your community to police terms of service violations, not to police content:** The heterogeneity of a community is a source of strength, as long as people are genuinely interested in the topic at hand. Heavy-handedness can have unintended negative consequences.

The ability to attract and nurture influential customers is a core competitive advantage for savvy organizations. Customer communities can serve as a vital part of that strategy because they provide a "living laboratory" for tracking, measuring, and nurturing influential customers. A fully developed Social CRM strategy will involve multiple social media, but it is enormously valuable to start with a home field advantage.

Notes and References

¹In his practical guide to work of mouth marketing, Andy Sernovitz has a simple definition. He defines word of mouth marketing as:

1. Giving people a reason to talk about your stuff.
2. Making it easier for that conversation to take place

See Andy Sernovitz, *Word of Mouth Marketing: How Smart Companies Get People Talking*, Revised Edition, 2009, p. 1.

²The researchers included Prof. Barak Libai of the Recanati Graduate School of Business Administration at Tel Aviv University, Prof. Eitan Muller, of the Stern School of Business at NYU, and Prof. Renana Peres, of the School of Business Administration at Hebrew University of Jerusalem and the Wharton School. Other network data was also used, but only Lithium-powered communities are reported here. The results do not vary strongly across different networks.

³All of these findings presume a competitive scenario in which there are two brands, here referred to as Fabergé and Breck. To test assumptions about where value comes from, the research also included a controlled scenario with Fabergé holding a monopoly. In this case, the gains were obviously much smaller — 15% when using random customers and 23% when using influencers. Because Fabergé is a monopolist, those gains come 100% from accelerated adoption.

⁴The structural characteristics of these networks varied substantially in terms of size, the average number of people in direct contact with one another, and the average degree of separation from one customer to another. These characteristics did not, however, affect the outcomes greatly — certainly not as greatly as the seeding of influencers or the presence of competition. As we will see later, other research gives more weight to the configuration of a network, particularly when modeling the actual diffusion of an idea.

⁵See, for example, Sernovitz.

⁶See <http://en.wikipedia.org/wiki/Centrality> for a more rigorous summary of the differences.

⁷See Lithium Technologies, “Community Health Index for Online Communities,” available from <http://www.lithium.com>.

⁸Fang Wu and Bernardo A. Huberman, “Novelty and Collective Attention,” *PNAS*, November 6, 2007, vol. 104 no. 45 17599-17601.

⁹Andrew T. Stephen and Jonah Berger, “Creating Contagious: How Social Networks and Item Characteristics Combine to Spur Ongoing Consumption and Reinforce Social Epidemics,” working paper available at: <http://marketing.wharton.upenn.edu/documents/research/Creating%20Contagious.pdf>

¹⁰Stephen and Berger, 15. Stephen and Berger use closeness rather than eigenvector centrality as their measure. In practice, the two are highly correlated.

¹¹Rene Algesheimer and Paul M. Dholakia, “Do Customer Communities Pay Off?” *Harvard Business Review*, November 2006.

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¹²See, for example, the literature review section of Scott A. Thompson and Rajiv K. Sinha, "Brand Communities and New Product Adoption: The Influence and Limits of Oppositional Loyalty," *Journal of Marketing* 72 (November 2008).

¹³By contrast, traditional reference groups, even networks of friends, are less voluntary. You can opt out of your network of friends, but at a great cost. Opting in and out of customer communities, on the other hand, is relatively simple. This gives online communities the characteristics of a "heterophilous" organization in Everett Rogers's sense. See Kristin de Valck, "Virtual Communities: A Marketing Perspective", *Decision Support Systems*, June 2009, vol. 47, n° 3, pp. 185-203 (in coll. with G.H. van Bruggen, B. Wierenga).

¹⁴See Charlene Li and Josh Bernoff, *Groundswell: Winning in a World Transformed by Social Technologies*, 2008, p. 44.