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Can Social Networks Predict What You'll Buy?

Start-ups Look to Link Purchasing Behavior With Friend Groups

By Abbey Klaassen

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NEW YORK (AdAge.com) -- Those stalking the social-networking field are betting that birds of a feather don't just flock together -- they buy together too.

While the merits of advertising on social networks are still debatable, there's emerging evidence that mapping the online relationships among consumers -- creating so-called social graphs -- can be just as valuable as traditional targeting and segmentation in predicting how people will respond to marketing messages.



"There's been a lot of very strong academic research in the last eight to 10 years around [online relationships] that's hinted toward this potential. But it's never really been harnessed or brought to life," said Shiv Singh, who leads the enterprise-solutions practice at Razorfish. A few start-ups and ad giant Yahoo are among those hoping to change that.

It's a concept borrowed from the offline world, most famously in a 2004 study around direct mail. A large telecom firm reached out to a target market, early adopters, to push a new internet-based communications service. It used company records to identify the people in communication with existing customers of the service, also known as "network neighbors," and pitched to them as well. Even when they weren't identified as early adopters, per se, the network neighbors were three times as likely to buy the service as those in the target market with no connection to existing customers.

"It may well be that direct communication between people is a better indicator of deep similarity than any demographic or geographic attributes," wrote the authors, then-NYU grad student Shawndra Hill (now a professor at Wharton), NYU professor Foster Provost and Chris Volinsky, a researcher at AT&T Labs. (It's unclear whether there was any word of mouth about the service, but the offer did not include an explicit peer endorsement.)

More than fantasy

Paul Moore, a Ph.D. and director of insights at Yahoo, has been studying this concept for almost two years, mapping social graphs using connections from instant-messenger buddy lists to Yahoo 360 and photo-sharing site Flickr. Yahoo hasn't yet tested the concept with advertisers but has with its own internal products.

In one test, Yahoo was marketing a fantasy-sports product combined with a digital-home product. It targeted Yahoo fantasy-sports players. Even though it already has a huge fantasy business, it wanted more reach. So it mapped fantasy users' network connections and found an additional 40% of people to whom it could target the campaign. It saw no difference in performance between the Yahoo fantasy-sports players and those who were connected via networks. The

tactic could have implications for how advertisers manage reach online.

"If you think about targeting, it's about taking a haystack and narrowing it down to a needle, applying a demographic layer, a geographic layer, behavioral layer, declared intent," said Mr. Moore, adding that once you have that fantastic population, oftentimes it's too small for a big-budget advertiser. In the Yahoo example, he said, "we got an additional 40% reach from people who would otherwise not be targeted by this ad because their sports-enthusiast behavior wasn't apparent."

Joe Doran is a former Microsoft executive who left last spring to become CEO of Media 6 Degrees, a startup hoping to tap similar principles across the web. He said if a large telecommunications firm can use its data to identify network neighbors and improve marketing response, then similar principles should apply to online utilities such as Facebook. His firm is using cookies and ad-serving data to determine interaction rates among people and find out who is close to whom.

"Those two identifiers ... are kind of like our inbound/outbound call logs," he said. In one way, the concept is almost the opposite of collaborative filtering. Instead of associating unconnected consumers through their similar preferences and behaviors, it associates consumers who are already connected and share values and beliefs, a concept called homophily.

Sifting through data

"It's a plausible hypothesis and makes sense," said Sarah Fay, CEO of Aegis Media North America, who is testing it for a big retail client.

Mr. Doran said his company shied away from using other forms of social-network-based targeting, such as scraping profile data (it's fragmented, hard to mine and often inaccurate since it's self-reported) or friend lists, since they've grown so big and impersonal (collecting friends is like a "blood sport," he said). But he's joined by several other firms who are hoping social-connection mapping will create a more valuable ad experience in social networks. There are trade-offs among what the various players offer: Media 6 Degrees has a broader view of people's activities online and sells ads across the web but doesn't have as granular information as another player, 33Across, which has agreements with sites such as Meebo.

33Across is licensing analytics technology to online communities to figure out people's friend networks and influence. Former Ogilvy executive and 33Across CEO Eric Wheeler said he's trying to take the sociological study of how people cultivate relationships online and marry it with mathematics that give it scale. Eventually, it plans to add an ad network. Another startup, Lotame, has created an ad network that targets based on social-network data.

SocialMedia.com has developed a relationship-targeting technology called FriendRank using data from social-network applications -- with whom does one play Scrabulous, for example -- to construct a sense of where consumers' strongest online relationships lie. Unlike Media 6 Degrees, it serves ads within social-network environments and incorporates the explicit associations between two people into its creative. A typical ad might have a call to action such as a quiz or question that is then sent to 10 of their friends. Should they interact with it, it will be sent to their networks, and so on and so on.

"Our thesis all along has been: Ads have to become social themselves," said Seth Goldstein, co-founder and CEO. "They can't just be traditional web ads on top of social networks."