Crunching the Data of Love

Match.com's secret: Watch what users do, not just what they say

By Devin Leonard

Two years ago, Mark Guilarte signed up with Match.com in search of female companionship. He was emphatic about his hair-color preference. The 26-year-old flight instructor from Arizona wanted a brunette. "I'm very picky," he says. "I knew what I was looking for."

Then Match.com recommended Carmen Lopez, a 25-year-old blonde, who was a housing manager with a military contractor and ... bingo. They were married in February. Carmen finds it strange that the nation's online personals service seemed to understand that she and her husband were meant for each other regardless of his hair-color preference. "I've always wondered, 'How the hell did they know?'" Carmen says. "Excuse my language."

The Guilartes can thank Amarnath Thombre, Match.com's vice-president of strategy and the keeper of the site's matching algorithm. Thombre, 38, seems ill suited to play Cupid. He is a dour quant with engineering degrees from the Indian Institute of Technology and the University of Arizona. Before he joined Match.com in 2008, he worked at i2 Technologies, a supply-chain software company. Thombre says the technology that helps people fall in love isn't so different from the kind that enables companies to whisk goods from warehouses to store shelves. "In both situations, you are trying to optimize data," he says with a shrug.

There must be something to Thombre's unromantic view of the human heart. On Apr. 26, IAC, the Internet conglomerate that owns Match.com, reported the company's number of subscribers hit 1.9 million in the first quarter of 2011, up 21 percent over the prior year. Its operating income climbed by 71 percent to $23 million. Mandy Ginsberg, president of Match.com's U.S. operation, says Thombre has played a large role in those gains. "He's brilliant," she says.

Thombre works out of Match.com's Dallas headquarters, where he oversees a staff of 12 mathematicians and analysts, including a chief statistician who met her boyfriend on the site. (Thombre met his wife offline in India.) Netflix, Amazon, and lots of other Internet companies use mathematics to recommend products based on user behavior. The big difference with Match.com: its subscribers are in a rush to find a paramour, and Thombre doesn't have much time to familiarize himself with their innermost desires. "I could make pretty accurate predictions about a woman who has been on the site for five years," Thombre says. "It's a lot harder when she's on the site for five days."

When people first sign up on Match.com they fill out a questionnaire. That's where Thombre's biggest challenge arises: Bad data. Users exaggerate their IQs and lowball their waistlines. They frequently discard their stated preferences. Match.com has found that 49 percent of men who insist on a woman who wants children actually chase prospective mates who don't particularly care. "They will say, 'I'm only interested in guys between the ages of 18 and 30,'" Thombre sighs. "The next thing you know they are e-mailing a 38-year-old."

Thombre's algorithmic remedy: pay more attention to the choices users make on their site than what they say they want. He uses a hypothetical example: Monica, a woman from New York. She says she longs for a rock climber who lives in the city and isn't interested in anyone who's been married before. Then Monica e-mails a divorced Match.com customer. The algorithm's response: dial down marital history and send her more divorcés, especially rock climbers from New York.
Thombre says the system speeds up the process by looking at any other men Monica contacted, and the other women who had targeted them. Presumably, they share similar tastes in men. "It's cluster mechanics," says Thombre proudly.

He admits he can't predict which customers will marry like the Guilartes. Match.com calls it a success when users exchange three e-mails. Of course, as in offline romance, these relationships often end in heartache; Match.com says that about half of its current subscribers are repeat customers. If nothing else, those returnees can take solace in this. Thombre is there for them, and so is his algorithm.

**The bottom line:** *Match.com tweaks its algorithms based on whom a user e-mails or checks out. Behavior often conflicts with stated desires.*

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