

Inside Match.com

Mandy and Amarnath have a very special relationship. As Match.com's president and key engineer, they've taken the world's biggest dating site to a new level. It now knows its users better than they know themselves.

Entering the offices of Match.com is a bit like strutting into a disco. Coloured lights flash from the ceilings, workers lounge on circular banquettes, dance music plays from hidden speakers. Despite being in a mid-rise office tower overlooking a turnpike in the dry, landlocked city of Dallas, Texas, the Match offices are evocative of a racier environment, where anything might happen. [...]

With the number of paying subscribers using Match, the world's largest online dating site, approaching 1.8 million, the company has had to develop ever more sophisticated programs to manage, sort and pair the world's singles. Central to this effort has been the development, over the past two years, of an improved matchmaking algorithm. "We had to get more intelligent," Mandy Ginsberg, the president of Match.com US, says. "If you say you want a guy between 30 and 35 in New York who has a master's degree, you're going to get thousands of matches."

Codenamed "Synapse", the Match algorithm uses a variety of factors to suggest possible mates. While taking into account a user's stated preferences, such as desired age range, hair colour and body type, it also learns from their actions on the site. So, if a woman says she doesn't want to date anyone older than 26, but often looks at profiles of thirty-somethings, Match will know she is in fact open to meeting older men. Synapse also uses "triangulation". That is, the algorithm looks at the behaviour of similar users and factors in that information, too.

Until Ginsberg joined IAC, which owns Match, in 2006, she worked at i2 Technologies, a supply-chain management company, also based in Dallas. She was promoted to her current post earlier this year, after former Match president Gregg Blatt was made chief executive officer of IAC. Besides having the right resume for the job, Ginsberg had enough experience in love to know that finding the right partner is tough.

After a divorce shortly out of college, she tried JDate, a site for Jewish singles, but kept coming up short. Then, while still at i2, she became involved

with an engineer at the company who was born halfway across the world. They soon married. "If I had laid out a criterion for what I was looking for, it would not have been a guy from south India," she told me. "People are complex. You're constantly making trade-offs about who's too tall, too short, too smart and too dumb. People come in and tell us a bit about what they're looking for. But what you say and what you do can be different." Academics call this "dissonance". "It's a theme that runs through social psychological literature," says Andrew Fiore, a visiting assistant professor at Michigan State University, who works on computer-mediated communication. "We don't know ourselves very well on a descriptive level." The same is true for the millions of Match users, says Ginsberg, and she tried to incorporate dissonance into the algorithm. "I might come in and say I'm looking for a nice Catholic guy between 30 and 40 who is non-married," she says. "But after weeks of looking at people, I might get an email from a guy who has kids, and I might accept that. It's all about behaviour modelling. All that data goes into algorithms and affects who we put in front of you." [...]

A key recruit was Amarnath Thombre, a soft-spoken engineer from Pune, India. Yet Thombre says his experience at i2, where he spent years finding ways to move products around the country more efficiently, was perfect preparation for the online dating industry. And once at Match, he, Ginsberg and a team of nine maths whizzes hired by Thombre, set about updating the Match algorithm. The way the Match algorithm learns, he says, is similar to the way the human brain learns. "When you give it stimuli, it forms neural pathways," he says. "If you stop liking something, those shut off. It's learning as you go." The same principles are powering the recommendation engines at popular sites around the web. Amazon uses similar technology to recommend new products for people to buy, Pandora learns from likes and dislikes to customise its internet radio stations, and Netflix famously offered \$1m to anyone who could improve the effectiveness of its algorithm by 10 per cent.

It is a subtle shift, but one with profound implications. "Before, matches were based on the criteria you set. You meet her criteria, and she meets yours, so you're a good match," Thombre explained. "But when we researched the data the



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whole idea of dissonance came into focus. People were doing something very different to the things they said they wanted on their profile.” As a result, Match began “weighting” variables differently, according to how users behaved. For example, if conservative users were actually looking at profiles of liberals, the algorithm would learn from that and recommend more liberal users to them. Indeed, says Thombre, “the politics one is quite interesting. Conservatives are far more open to reaching out to someone with a different point of view than a liberal is.” That is, when it comes to looking for love, conservatives are more open-minded than liberals.

With a mountain of data in its servers from the 75 million users it has had since it was founded, Match has been able to uncover a series of curious trends. Some findings are obvious. Women are less likely to email with men who live far away, men who are older than they are, and men who are short. Other findings are more nuanced. Catholic women are especially unlikely to email a Hindu or atheist male. While men are most particular about hair colour, a woman’s income is less important to them. “We are so focussed on behaviour rather than stated preferences because we find people break from their stated preferences so often,” Thombre says.

The Match algorithm is constantly at work behind the scenes, scouring terabytes of data and working to find possible matches. Likely candidates are suggested when users ask to see “more like this” and are also put forward through the “Daily5”, a selection of profiles emailed to users each day. But it is not enough for Match simply to suggest dates without gauging the effectiveness of its efforts. When each Daily5 profile is viewed the user has to “rate” that profile before he or she can see the next one. The site asks users if they are interested in the suggested match, and gets a reply of “Yes”, “No” or “Maybe”. Each answer is recorded and logged with the user’s profile, becoming another data point for the algorithm to work with. [...]

Online dating has come of age. Once a seedy corner of the internet, digital romance is today nearly as commonplace as e-commerce. Of the 87 million singles in the US, nearly half of them, or 40 million, have tried online dating, according to the US Census. Some surveys estimate that one in five new relationships, and one in six new marriages, begins online. “This is one of those businesses where scale really matters,” says Ginsberg, noting that Match has facilitated 1.2 billion emails since 2005, and 110 million virtual winks [a way for members to “break the ice” before emailing] in the past six months.

She also says there is no reason to expect growth to stall any time soon, as online dating becomes more mainstream and new singles of all ages come online. “With the divorce rate in this country being 50 per cent, we’re a reflection of that society,” she says.

Internet dating has also matured into a robust business. Online dating is also an international phenomenon. Native language sites flourish in countries around the globe. Match UK is successful, though operated independently. And while Match is the best-known and largest online dating site on the web, it has plenty of competition. Chemistry.com, another IAC property, is growing. eHarmony, a rival, has proved popular with an older crowd looking for serious relationships. Niche sites cater to specific nationalities and religions, such as Shaadi for Indians and JDate for the Jewish crowd. OkCupid, launched in 2004, is free to use and has caught on with the young, hipster subset. Its success led IAC to purchase it for \$50m earlier this year. [...]

So far, Match has not been knocked askance by the advent of social networking. In fact, advertising on Facebook has become a great recruiting tool for Match. “Facebook is about people you know, and Match is about connecting to people you don’t know,” says Ginsberg. And while there is indeed more competition than ever before, 16 years after Match.com was founded as one of the original online dating sites, it is still positioned as the industry’s frontrunner.

Match.com was founded in 1995 by Gary Kremen, an entrepreneur who saw the potential of the web early on. Single at the time, Kremen was using 1-900 number dating hotlines he found in the classified sections of newspapers to meet women. “I noticed I was paying a lot of money for those numbers, and those big bills got me thinking that maybe people would pay the same online,” he says. Kremen was right. He founded a company called Electric Classifieds in 1993, and two years later unveiled Match. It was one of the first sites to use the internet to facilitate dates, and among the first to charge money for a service. “That was the original idea, to do classified ads but make it electronic,” said Kremen. “I always knew a lot of women; I’ve done a lot of dating in my life.” Kremen says he designed the site with women in mind. “You have to design the whole system for women, not men,” he said. “Who cares what men think? So things like security and anonymity were important. And little things, like talking about body types, not pounds. Never ask a woman her weight.” [...]



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Not all digital romances are wholesome and perfect. Nor is the online dating experience universally positive. Plenty of users give up on the service after one too many bad dates. An online profile, of course, is not an accurate reflection of someone, but a template for them to project their ideal self-image. "Once you meet them in person, it's harder to have as many optimistic illusions about them," says Fiore. "We engage in this kind of idealisation when we're faced with limited information about people online. We fill in the gaps optimistically." Fiore calls this "an illusion of specificity". "It's a way to give someone a sense of control," he says. And even Fiore acknowledges that for all the utility online dating provides, reducing potential soulmates to pixilated thumbnails and fields of information can be a draining experience. "It can feel a lot like shopping for a blender on Amazon.com," he says. "But these are people we're talking about, not blenders." Not even the most potent computers in the world, it seems, can engineer a panacea for lonely hearts.

Despite these concerns, it is becoming accepted wisdom that any lingering shame around online dating is gone. Familiarity with the internet, a more casual dating culture and verifiable success stories have all helped. By now, most of us are not far removed from a couple who met online.

"There's a tipping point happening," says Ginsberg. "There used to be this stigma, or it was 'good for my friends but not for me'. People don't realise how pervasive online dating is." And it is an industry that has evolved. While plenty of online hookups still happen the old-fashioned way – by searching based on criteria such as location, age and interests – an increasing amount of digital matchmaking is being powered by sophisticated algorithms like the ones Ginsberg and Thombre conjured up. With their algorithm, Ginsberg and Thombre have taken the allure of online dating and amplified it. Instead of simply creating a digital disco where it is easy to find lots of potential dates, they have put forward a tantalising promise. By evaluating your stated preferences, mapping your site behaviour and using triangulation, Match.com will get to know you, and what you want, better than you know yourself.

It's not a promise Match can keep with all of its users. But for some, it can prove transformative. "We don't know another industry that can change people's lives so profoundly, except maybe the medical industry," says Ginsberg. "We often deal with the maths and the statistics, and we have to keep reminding ourselves that this is about helping people find love. There's not that many businesses that can say that."



Source: Adapted from Galles, D. (2011) Inside Match.com, *Financial Times*, 29 July.
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Through the symbiotic relationship between the iPod player and the iTunes music downloading service, Apple also created high switching costs for customers. When iTunes users contemplated the idea of purchasing a digital music player other than an iPod, they would have faced the switching costs of not being able to play the songs that they purchased through the iTunes platform, since their format was only compatible with the iPod product.

- *Switching costs resulting from customer incentive programmes* occur when firms offer customers benefits in return for their loyalty. A prominent example here is the frequent-flyer bonus programmes offered by airlines, where passengers earn free upgrades or free tickets after having flown a certain number of miles with the specific airline. Also, Tesco has created switching costs for customers through its Tesco Clubcard. Owners of a Tesco Clubcard, who have been using it for shopping in physical stores, have strong incentives to prefer Tesco.com over other online grocery and non-food shopping sites because they can continue collecting incentive points by shopping online.

For consumers, it is sensible to consider overall costs, including switching costs, when deciding on a new purchase. With hindsight, it is surprising that switching costs received so much attention during the Internet boom years, since the above-mentioned types of