

Danitte Kozai | CISC497 assignment 2

OkCupid is a recently popular online dating site that, based on users' answers to a detailed questionnaire, uses an algorithm to calculate a score for each person's compatibility with other users, and suggests matches that have the highest scores for compatibility (OkCupid, 2014). Matching based on an algorithm is an effective way to meet people and form a lasting relationship because it ensures that people are matched with those with whom they have compatible beliefs and lifestyles (Macrae, 2013). Conversely, algorithmic matching has several shortcomings because it does not account for attributes such as physical attraction and personal preference, and the large number of suggested matches may lead to difficulty committing to one person (Finkel, Eastwick, Karney, Reis, & Sprecher, 2012). One solution is for human moderators to monitor the site by screening matches suggested by the algorithm and making their own suggestions, thereby adding a human element to the process.

Websites that match people based on an algorithm are an effective way to meet one's spouse. Studies show that, after ten and thirty years, couples in arranged marriages felt more connected to each other than couples in "regular" marriages (Bentley, 2011). On further inspection, couples in arranged marriages have their partners preselected based on important criteria such as compatible "families, interests, and life goals" (Bentley, 2011). Additionally, a study in the *Journal of Personality and Social Psychology* notes that lasting relationships are built on similarities, because people with similar attitudes, beliefs and views validate each other and are less likely to have conflicts (Borrelli, 2014). Algorithmic matching exploits the criteria used by arranged marriages to suggest matches, and researchers at Chicago University report that married couples who met online are twenty-five percent more likely to stay together than couples who met in person first (Macrae, 2013). Moreover, Harvard researcher Dr. Robert Epstein notes

that much of Western dating focuses on chemistry and physical attraction, and couples tend to overlook crucial details such as values and life goals (Bentley, 2011). Like the matchmakers in arranged marriages, algorithmic matching focuses on users' similarities regarding values and life goals rather than chemistry and attraction, thereby minimizing the risk of "falling in love" with a person who does not share one's values (Macrae, 2013). There are advantages to dating website matching by algorithm; however, the personal connection between two human beings is somewhat subjective and may make matchmaking difficult to implement algorithmically.

Although there are benefits to matching by algorithm, inherent flaws in the mathematical process prevent the algorithm from perfectly determining user compatibility. As is the case with OkCupid, a numeric index may not reflect real-life compatibility because there are factors that impact a relationship's success that are difficult to integrate into a user questionnaire, and are often difficult to know until two people meet in person, such as liking a person's personality (Finkel, Eastwick, Karney, Reis, & Sprecher, 2012). Moreover, probability may prevent a couple from ever being matched to begin with; users on OkCupid answer a subset of 350 questions from a database of thousands of possible questions and are matched with others based on the similarities of questions they both answered (OkCupid, 2014). Mathematician Chris McKinlay comments that a person can only be matched with another user if they answer the same questions and have similar answers, and even small differences in one's answers can greatly influence the compatibility index (Collman, 2014). Furthermore, often the number of choices suggested by the algorithm can be overwhelming and make it difficult to choose one candidate with whom to pursue a lasting relationship (Finkel, Eastwick, Karney, Reis, & Sprecher, 2012).

To obtain the benefits of matching by algorithm while minimizing the deficiencies of the process, one solution is to hire human "matchmakers" to moderate dating websites. Similar to the

“matchmakers” in arranged marriages, moderators can use suggestions generated by the matching algorithm and apply intuition to recommend matches that they think are compatible, as well as add their own suggestions not recommended by the algorithm (Bentley, 2011).

Experienced moderators can find subtle similarities in the way users answer questions that an algorithm that compares answers to the same questions would not necessarily rank as highly compatible, as described above. Moreover, with the appropriate budget and training, moderators could even act as third-party consultants for daters by giving objective advice and helping solve problems, similar to the role of a matchmaker in some cultures (Bentley, 2011).

There are several advantages to online dating services that generate matches using an algorithm, one of the most important being that the algorithm eliminates the possibility of being initially blinded by attraction or chemistry without checking if one shares common values, interests or goals with the other person. Conversely, using an algorithm to find matches does not work perfectly because there are factors that are important to relationships that an algorithm does not account for in the matching process. Generally, matchmaking algorithms can be effective under the condition that the dating site hires moderators to monitor the matches.

### References

Bentley, P. Why an arranged marriage is “more likely to develop into lasting love”. The Daily Mail Online. Retrieved from <http://www.dailymail.co.uk/news/article-1363176/Why-arranged-marriage-likely-develop-lasting-love.html>.

Borrelli, L. Do Opposites Attract Or Does Like Attract Like In Relationships? Understanding The Science Of Love. Medical Daily. Retrieved from <http://www.medicaldaily.com/do-opposites-attract-or-does-attract-relationships-understanding-science-love-276918>.

Collman, A. How a mathematician, 35, used computer algorithms to hack OkCupid and find his future fiancée in just 90 days. The Daily Mail Online. Retrieved from <http://www.dailymail.co.uk/news/article-2543750/How-mathematician-35-used-computer-algorithms-hack-OkCupid-future-fiancee-just-90-days.html>.

Finkel, E., Eastwick, P., Karney, B., Reis, H., & Sprecher, S. Online Dating: A Critical Analysis From the Perspective of Psychological Science. The Association for Psychological Science. Retrieved from <http://www.psychologicalscience.org/index.php/publications/journals/pspi/online-dating.html>.

Macrae, F. Online daters are 'more likely to end up in a happy marriage' than those who meet through traditional methods. The Daily Mail Online. Retrieved from <http://www.dailymail.co.uk/news/article-2335442/Online-daters-likely-end-happy-marriage-meet-traditional-methods.html>.

OkCupid (2014). Calculating Match Percentages. Retrieved from <http://www.okcupid.com/help/match-percentages>.