

eHarmony – *NoFilters* project report

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Plan of Action

In order to tackle the variety of research questions proposed, we combined our online experimental approach with the results provided by the Opinium survey. We summarise the findings below.

Question 1: Finding the 'Swipe Out' point

- How many seconds does the average single spend on a profile before swiping left or right?

The results of Experiment 1 suggested that people spend **a little over one second** viewing each profile before making their decision.

Question 2: Finding the optimum time to give a prospective partner

- What is the optimum time singles should be giving a new romantic prospect?

Across Experiments 1-3, we found that the **one second** mark seemed to be an important cut-off. Participants naturally spent that long viewing each profile, and when we limited the amount of viewing time to one second, there was no change in how they responded. However, when we lowered this limited viewing time further, we saw a shift in their responses – people were more reluctant to select ‘match’ in these circumstances. Therefore, the optimum time to spend on a basic profile (photograph and name/age only) is about one second.

Question 3: The ‘dealbreakers’ for singles

- What are the biggest dealbreakers for singles searching for love online – and how compromising on just one of the top 5 (i.e. height, weight, hair colour, age, location) could make love more possible, and by how much?

To answer this more complex question, we broke it down into two stages. The first involved a large-scale questionnaire approach (Opinium), which established the biggest dealbreakers for today’s single female and male daters. **For women, the biggest dealbreaker was location** – they are clearly very sensitive to how far away potential partners might live. **For men, the most important consideration was a woman’s smoking status.**

The second stage used two online experiments simulating the *eharmony* app. In the first, each profile was displayed in full, with information regarding location, smoking status, whether the person had children, how often they exercised, and so on (mimicking *eharmony*'s 'factfile' section). In the second, female profiles provided all this information EXCEPT for their smoking status. For male profiles, we removed their location information.

Interestingly, we didn't find that people were more likely to 'match' for profiles with this information removed but instead found the opposite! Men were more interested in women when their smoking status was visible than when it wasn't, and this was particularly true when the men could see that women were non-smokers. In other words, rather than being more open-minded when the information was absent, men were happier when they knew for sure that women were non-smokers. We found a similar pattern for women too, with our results showing that they were generally more interested in male profiles when the location information was visible compared with when it wasn't. Bottom line: **daters like to have all the facts when deciding who to date.**

Bonus Question: Clusters in the data

- Are there particular types of people when it comes to the biggest dealbreakers? Do we see commonalities where people tend to group together in terms of which traits are most important?

To answer this question, we used a set of tools known as *cluster analysis*. These statistical approaches are able to take a set of data and identify groups that would not have otherwise been evident.

The data from the Opinium survey, where users rated the importance of 15 key traits in a partner, is a perfect example from which to attempt to derive clusters. It is possible to see whether there are groups of daters who rate certain characteristics as being very important or unimportant, creating an interesting 'dater preference profile'. Our analysis revealed the presence of **two sub-groups** within the data, which we will call Groups A and B.

Surprisingly, these two groups differed statistically significantly across every trait - from the age of a prospective partner through to whether they would like children or not - in a consistent manner. **The daters that were in Group B rated every dimension as less important than those in Group A**, and while in some instances Group B was similar to Group A, they were always less bothered about these traits. Figure 1 shows the differences between these groups, plotted by the size of the differences between them. While the two most important traits we analysed in our other experiments

(smoking status and location) showed stronger agreement between the groups, the rest of the traits showed differences that were still very large in statistical terms.

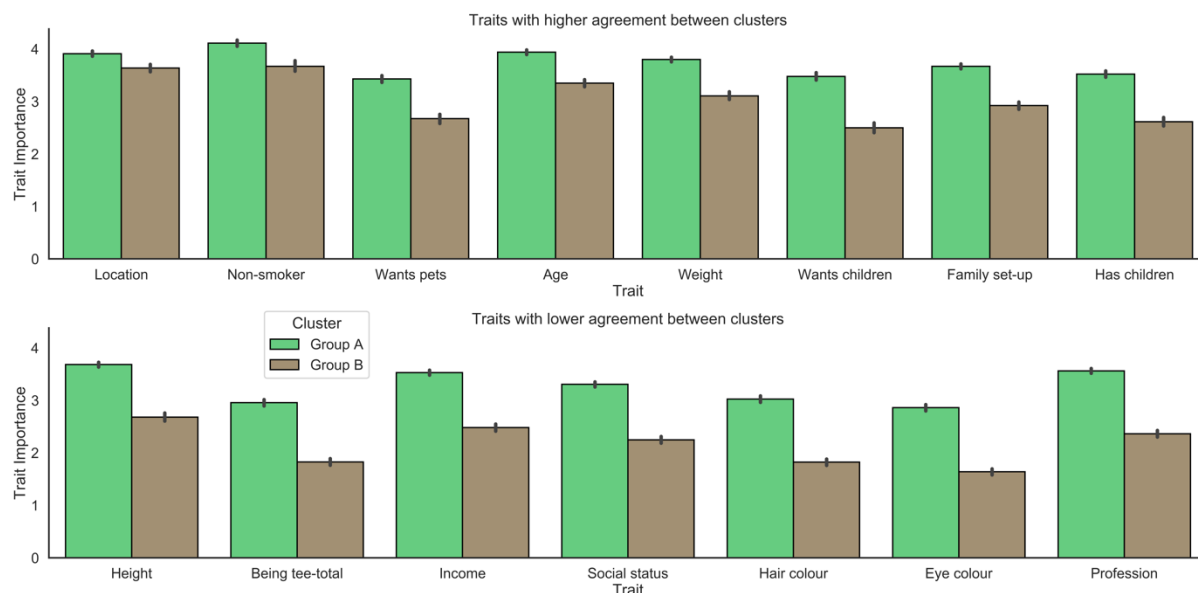


Figure 1. Differences in how important each trait was rated by daters placed in Group A vs Group B by a cluster analysis. The top graph shows traits with relatively high agreement, while the lower graph shows those with much larger differences.

From the total sample, 56% of daters were placed in Group A (the more 'exacting' group), and 43% into Group B, who were comparatively less fussy. It is well established in the psychology of attraction research that women tend to have higher standards than men, and this was reflected in the composition of the groups – Group A was 60% female, while Group B was 51% female. This difference in female to male allocation is not something we would expect by chance alone. Perhaps more interestingly, when examining the data across the three different age groups (18-34, 35-54, 55+), we found that while the split of ages between Groups A and B was about even for 35-54 and 55+ age groups (53% and 54% in Group A respectively), the

younger demographic was the most exacting, with 64% in Group A. Again, this is not a pattern we would expect by chance. The clusters reveal a surprisingly simple picture of dater standards. There exists a group of daters that consider a broader range of traits as more important, while others are relatively less fussy. The split in the sample is about even, but women and younger individuals tend to be in the more exacting group.

Additional Details

General Experiment Details

- Heterosexual men were shown 100 images of women
- Heterosexual women were shown 100 images of men
- Images were downloaded using Google Images searches by generating popular male and female names, and collecting the first few search results. Ages were estimated. The remaining profile information was generated in order to approximate the frequencies found in real dating profiles (how many people smoked, how many reported having children, and so on)
- Experiments were carried out online using the *Gorilla* survey platform
- Participants were recruited via *Amazon Mechanical Turk* and paid for their time
- Participants were asked to decide whether each profile might be a match for them or not

Experiments 1-3 (see Figure 2)

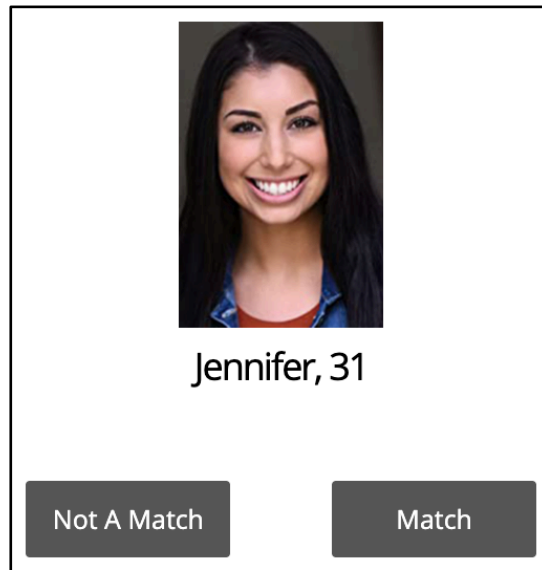


Figure 2. Screenshot of what participants saw in Experiments 1-3.

Experiment 1 – No time constraints

- 202 participants initially completed the task
- 25 participants were excluded (did not self-report as heterosexual)
- Final sample: 59 women and 118 men (average age: 35.63 years)
- After removing extreme response times (> 2 SDs from the mean), the average time spent on each profile was 1278.52 ms
- No statistically significant difference between men and women (although on average, men were 116.93 ms slower than women to make a decision)

Experiment 2 – Image onscreen for 787 ms

- 220 participants initially completed the task
- 23 participants were excluded (did not self-report as heterosexual)

- Final sample: 68 women and 129 men (average age: 29.46 years)
- We removed extreme response times (> 2 SDs from the mean)

Experiment 3 – image onscreen for 1033 ms

- 174 participants initially completed the task
- 18 participants were excluded (did not self-report as heterosexual or had taken part in Experiments 1 or 2)
- Final sample: 50 women and 106 men (average age: 35.39 years)
- We removed extreme response times (> 2 SDs from the mean)

Comparing the three experiments (see Figure 3)

- Men are 3.06 times more likely to respond 'match' than women
- Compared to the unlimited condition, the odds of selecting 'match' when the viewing time was 787 ms is 0.693, or put another way, the chances of matching were reduced by 31%
- Compared to the unlimited condition, matches are not more or less likely when viewing time is 1033 ms condition
- Compared to the 787 ms condition, the odds of a match were 1.76 times more likely in the 1033 ms condition – or, the odds of matching increased by 76%. This builds confidence in our finding that most of these 'match' decisions were made in around one second

Probability of Matching across viewing durations for each sex

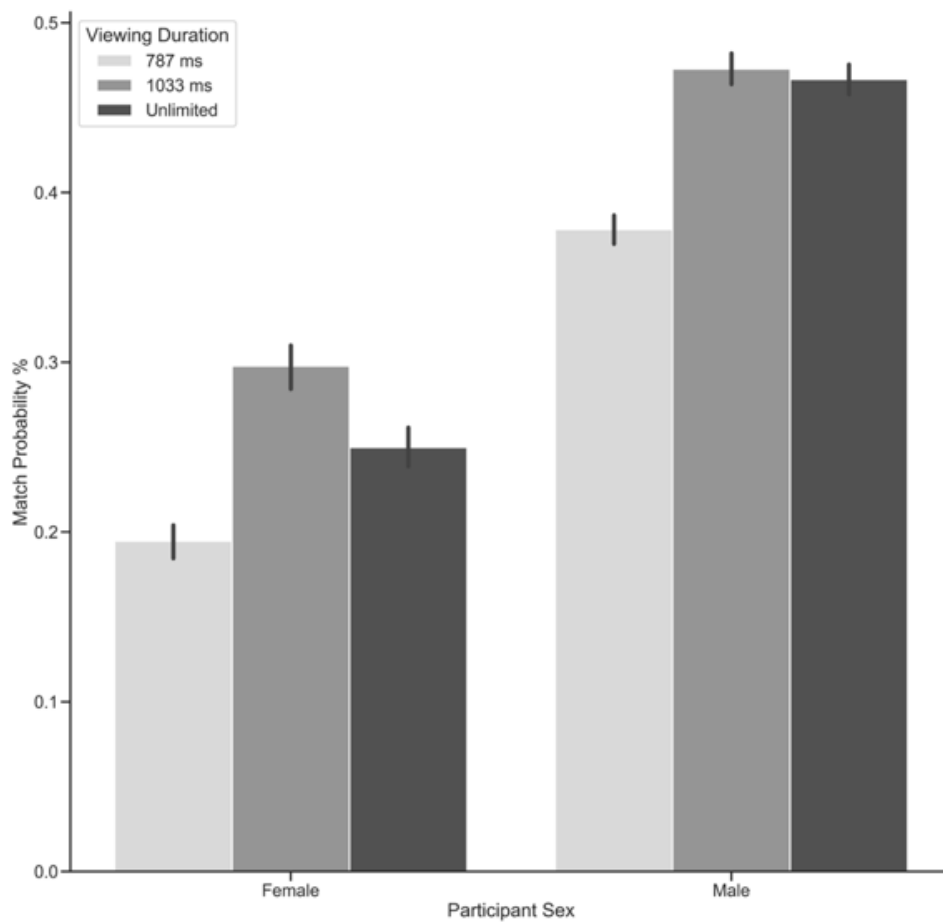


Figure 3. Summary of the results for Experiments 1-3.

Experiments 4-5 (see Figure 4)

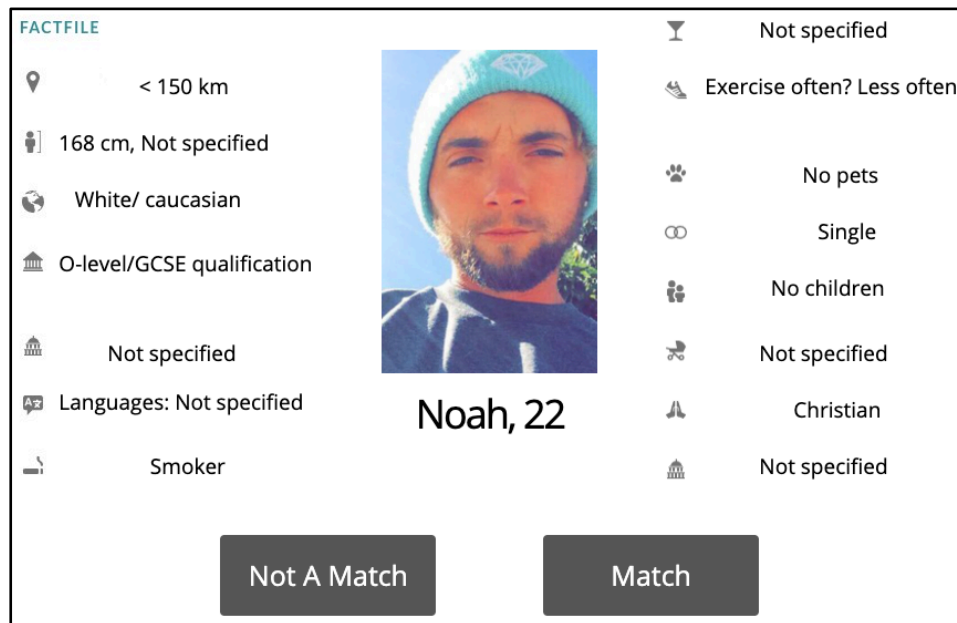


Figure 4. Screenshot of what participants saw in Experiment 4.

Experiment 4 – All profile information provided

- 200 participants initially completed the task
- 17 participants were excluded (did not self-report as heterosexual)
- Final sample: 57 women and 126 men (average age: 35.17 years)
- After removing extreme response times (> 2 SDs from the mean), the average time spent on each profile was 2033 ms, which was significantly longer than in Experiment 1, by 812 ms

Experiment 5 – Information regarding biggest dealbreaker removed

- 203 participants initially completed the task
- 18 participants were excluded (did not self-report as heterosexual)
- Final sample: 65 women and 120 men (average age: 28.51 years)

Comparing the two experiments (see Figure 5)

- We analysed responses to female and male profiles separately, to see how often they received 'match' selections in the two experiments
- On average, men were more likely to match profiles when all of their information was visible
- However, this was particularly true for non-smoking female profiles – these had a greater increase in their 'match' likelihood, suggesting men were 'reassured' with this information
- Women responded 'match' more often when all the information was provided (Experiment 4), suggesting they generally wanted to know how far away the men lived (no matter whether it was near or far)

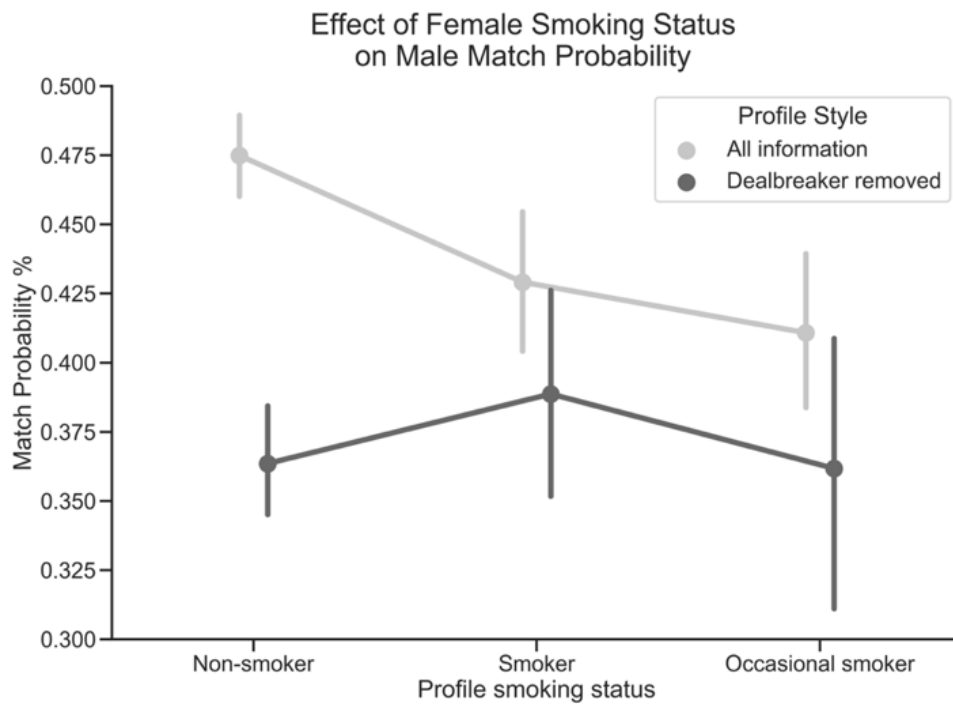


Figure 5. Summary of the results for Experiments 4-5, for male respondents to female profiles.