

# The Opinion Matching Effect (OME): A Subtle But Powerful New Form of Influence That Is Being Widely Employed on the Internet Without User Awareness

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## Summary

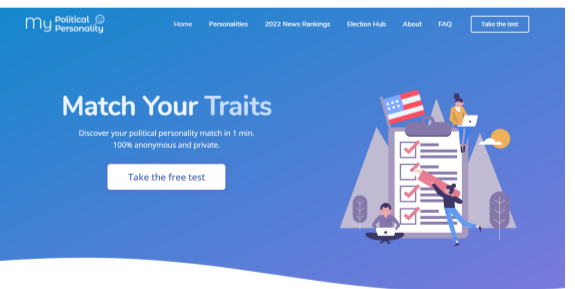
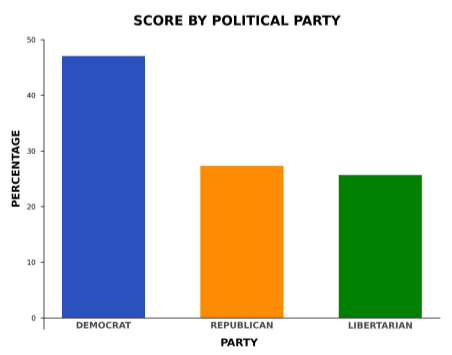
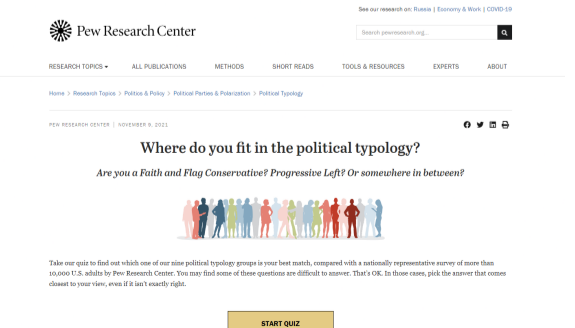
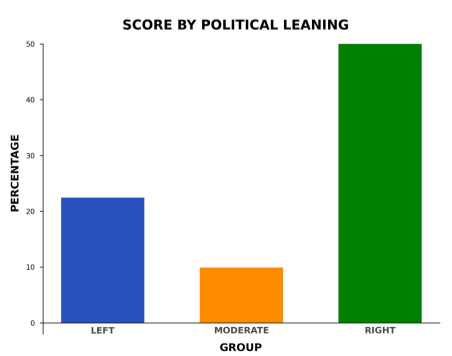
In recent years, powerful new forms of influence have been discovered that the internet has made possible. The Search Engine Manipulation Effect (SEME) was discovered in 2013, and a comprehensive report about its effectiveness was published in PNAS in 2015, with multiple replications published since then. SEME research shows that bias in search results can produce large shifts [ 4 ] in the opinions and voting preferences of undecided voters without their awareness – upwards of 80%

shifts in some demographic groups. We now introduce another new form of influence: the Opinion Matching Effect (OME). Many websites now “help” people form opinions about products or political candidates by first administering a short quiz and then informing people how closely their answers match product characteristics or the views of a candidate [ 1 ]. But what if the matching algorithm is biased? We describe a series of randomized, controlled, counterbalanced, double-blind experiments that measure the possible impact of this type of matching [ 2 ]. A total of 800 politically diverse, eligible US voters participated in

the experiments. They were asked to form opinions about the two candidates in the 2019 election for Prime Minister of Australia (thus assuring that our subjects were initially “undecided”). After reading basic information about the candidates, they were asked questions about their opinions and voting preferences. Then they were given a short quiz about various political issues, after which they were told how closely their views matched those of each candidate. Then they were asked those questions again, and we measured changes in opinions and voting preferences. Participants were randomly assigned to one of three groups: people who were

told their answers closely matched the views of Candidate A, Candidate B, or both candidates equally. This produced shifts of between 73% and 96% in voting preferences in the two bias groups, with no participants showing any awareness of being manipulated [ 3 ]. We also present data from real opinion matching websites showing that responding at random to their online quizzes can produce significantly biased recommendations. In summary, we show not only that OME is a large effect; we also show that it is being used to manipulate.

### 1 Website Examples with Results Distribution

- [politicalpersonality.org](http://politicalpersonality.org)


- [pewresearch.org](http://pewresearch.org)



### 2 Double-Blind Experiment

**Scenario:**  
2019 election for Prime Minister of Australia

**Randomly-Assigned Groups:**  
Participants are pre-assigned to 1 of the 3 groups in the experiment

- Favors Candidate A
- Favors Candidate B
- Favors both candidates equally

**Procedure:**

- Screening Questions
- Provide background information of both candidates
- Pick a preferred candidate
- Take the opinion-matching quiz, which shows the political similarity between the participants with both candidates according to the randomly assigned group
- Pick a preferred candidate again
- Submit and Feedback

### 3 Manipulation Effects

The experiment used a 2 x 2 factorial design:

- Factor 1:** Length of quiz, 8 vs. 16 questions
- Factor 2:** Flesch-Kinkaid reading level, low vs. high

We found significant main effects and interactions. Main finding: Shorter quizzes produced larger vote shifts. Opinions about the candidates also shifted in the predicted direction.

Group	VMP
8 questions, high readability	77%
8 questions, low readability	91%
16 questions, high readability	56%
16 questions, low readability	85%

### 4 Vote Manipulation Power

$$VMP = \frac{p' - p}{p}$$

where p is the total number of people who voted for the favored candidate pre-manipulation, and p' is the total number of people who voted for the favored candidate post-manipulation.

### 5 Further Information

**AIBRT Internet Studies:**  
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