

# The Answer Bot Effect (ABE): Another Surprising Way Search Engines Can Impact Opinions

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## Summary

The first search engines served merely as indices to the content of the World Wide Web. Over time, they came to be used for other purposes—as tools for tracking user behavior, for example. In a series of five controlled experiments reported in PNAS in 2015, Epstein and Robertson demonstrated the power that search results have to shift people’s opinions and voting preferences without their knowledge—by up to 80% in some demographic groups. They called this phenomenon the Search Engine Manipulation Effect (SEME), speculating that its power derives from the enormous trust people have in algorithmically-generated content. The present experiment, which employed a diverse sample of 425 adults from 36 U.S. states, was conducted to determine whether a new feature of search results pages—the answer box (or “featured snippet”) at the top of the page—might also impact opinions. Subjects were first given basic information about two candidates running for prime minister of Australia in 2010 (this, in order to assure that subjects were “undecided”), then asked questions about their voting preferences, then allowed up to 15 minutes to conduct an online search for information about the candidates using our custom search engine, then asked again about their voting preferences. Search results and web pages were real; only the ordering of search results was varied between groups. Some subjects saw search results favoring one candidate, some saw results favoring the other, and some saw results favoring neither. Half the subjects saw results pages without answer boxes, and half saw results pages with answer boxes—some boxes with content favoring one candidate or the other, some with content favoring neither. The procedure was controlled, randomized, and counterbalanced. The no-box conditions replicated earlier SEME findings, producing predictable shifts in opinions about the candidates, as well as an overall shift in voting preferences of 43.3%. The box conditions, however, produced a significantly greater shift in voting preferences: 47.9%. The presence of answer boxes also significantly reduced both the time people spent searching (from an average of 252.3 s to 238.0 s) and the number of search results people clicked (from an average of 4.27 to 3.35). We conclude that answer boxes—and perhaps other new high-tech tools, such as personal assistants, that simply give people “the answer”—are potentially powerful means for influencing people without their knowledge—a new form of influence we call the Answer Bot Effect.