

## Does it Matter if Respondents Look Up Answers to Political Knowledge Questions?

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### Abstract

Using novel instrumentation from a large national sample, this research note examines respondents who look up answers to factual knowledge questions. Consistent with past work linking outside search to a self-enhancing response style, we show that people who research the answers to knowledge questions also self-report higher levels of political engagement. Moreover, validated vote data indicate that higher self-reports of registration status and turnout are *overreports* of the actual behaviors. Finally, we analyze the characteristics of people who engage in outside search and explore whether simple warnings are effective at reducing this behavior.

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As survey researchers increasingly collect data online, there is evidence that some respondents look up the answers to political knowledge questions, even after being instructed not to do so (Clifford and Jerit 2016; Motta, Callaghan, and Smith 2016). Yet because researchers have only recently developed instrumentation to identify outside search, important questions remain about the consequences of this behavior for data quality. We explore this topic using novel instrumentation from the American National Elections Studies (ANES) 2018 Pilot Study. For the first time in its history, the ANES measured outside search with “catch questions,” which are difficult items that usually can be answered only with outside assistance (Motta et al. 2016). This new instrumentation, combined with the usual questions relating to attitudes, demographics, and political knowledge provides an unparalleled opportunity to analyze people who research answers to survey questions.

### **Existing Findings & Research Gaps**

A coherent set of findings has emerged regarding online look-up. Randomized mode experiments show that outside search is more likely to occur in online surveys compared to modes where the interviewer is present (Fricker et al. 2005; Clifford and Jerit 2014). Online look-up has been observed in subject populations in the U.S. and abroad (e.g., Jensen and Thomas 2014; Motta et al. 2016; Gummer and Kunz 2019). Lastly, knowledge scales are less valid when respondents research the answers (Smith, Clifford, and Jerit 2020).

Nevertheless, one might remain skeptical of the scope of this problem. On its face, outside search affects the measurement of a single concept (political knowledge), typically measured with a handful of questions. Thus, the negative effects of search may be limited to a small number of survey items. These claims have received little empirical scrutiny, a surprising gap given that this behavior is thought to reflect a distinctive response style (Shulman and Boster

2014; Gummer and Kunz 2019). For example, Shulman and Boster (2014) argue that outside search stems from a type of socially desirable responding called “self-deceptive enhancement” or SDE (Paulhus, Harms, Bruce, and Lysy 2003). Researching the answers to factual questions allows people to “appear more skillful, competent, or attractive” in the domain of political knowledge (Shulman and Boster 2014, 179). Unlike other forms of socially desirable responding, SDE is *more* prevalent in online surveys because the lack of supervision allows respondents to misrepresent their competencies (Booth-Kewley, Larson, and Miyoshi 2007). At present, however, it is unknown whether the effects of a self-enhancing response style extend beyond political knowledge items. Thus, our first goal is to determine whether people who look up answers to factual questions answer *other* items in a manner that is indicative of a self-enhancing bias.

Respondents who engage in outside search challenge the conventional understanding of the survey response (e.g., Tourangeau et al. 2000) because these individuals “are going the extra mile by increasing their response burden [i.e., they are not satisficing]” (Gummer and Kunz 2019, 5). Gummer and Kunz further argue that respondents who have high levels of ability or motivation will be the most likely to exert this extra effort both because they “feel that they should know the answer,” and they are better equipped to find it (2019, 6). Yet existing evidence points in different directions. Gummer and Kunz (2019) report a positive and significant relationship between education and the tendency to engage outside search in an online survey of German respondents, while Smith, Clifford, and Jerit (2020) report a null effect in a national sample of U.S. respondents. Accordingly, our second goal is to revisit which respondents research answers and examine whether simple instructions can reduce this behavior.

## Empirical Analysis

Our empirical analysis is based on the 2018 ANES Pilot Study (N= 2,500), administered from December 5–21, 2018 by the YouGov survey firm.<sup>1</sup> The analysis proceeds in three steps. First, using the catch questions, we identify respondents who look up the answers to political knowledge questions and substantiate the claim that these individuals were using outside sources while completing the survey. Second, we examine whether searchers exaggerate their level of political engagement. We augment the pilot study with validated voter data from TargetSmart, allowing us to establish whether higher self-reports of turnout and registration are overreports. Finally, we examine who engages in outside search and analyze whether simple instructions can reduce this behavior. To that end, the 2018 Pilot Study included a question wording experiment in which a random half of respondents saw a message asking them not to look up the answers to the knowledge questions.

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<sup>1</sup> The survey was designed by ANES Principal Investigators and funded by the National Science Foundation. Eligible respondents had to be U.S. citizens 18 years or older, and the survey was conducted using non-probability sampling (AAPOR Refusal Rate 1 = .55). According to ANES documentation, this method “produces a sample that looks similar to a probability sample on the matched characteristics, but may still differ in unknown ways on unmatched characteristics” (<https://electionstudies.org/data-center/2018-pilot-study/>). References to statistical significance should be interpreted in the context of a non-probability sample. Analyses are conducted on the matched sample and employ survey weights. All reported statistical tests are two-tailed.

### *Catch Questions*

In the 2018 Pilot Study, two open-ended catch questions appeared after the political knowledge items. The first one asked, “In what year did the United States Supreme Court decide the case *Geer v. Connecticut?*” (1896), and the second item asked, “In what year was the Alaska Purchase Treaty signed?” (1867). Given the obscurity of the facts, the typical respondent is unlikely to know the answer to these questions. People who provide the correct response are assumed to have looked up the answer and classified as searchers, while those who do not answer the question or answer it incorrectly are classified as non-searchers. In the pilot study, roughly fifteen percent of respondents (14.6%) gave the correct answer to *Geer* and 18.2% gave the correct answer to *Alaska*. This implies that 20% of respondents did an outside search on at least one of the catch questions and 13% did so on both. Catch questions provide an individual-level measure of search engine use, but they have drawbacks. In particular, the researcher must assume that people who research the answer to the catch questions also looked up the answers to the political knowledge items. Fortunately, it is possible to validate the catch questions with timing data and other metrics.

Like previous ANES surveys, the 2018 Pilot Study included four traditional political knowledge questions (three open-ended, one closed-ended). The open-ended items asked respondents to identify the “job or political office” held by John Roberts and Angela Merkel as well as the length of a term in the U.S. Senate. The closed-ended question asked respondents to name the program with the lowest amount of federal spending (selecting among foreign aid, Medicare, national defense, and Social Security). A four-item scale was created from these questions with correct answers scored as “1” and incorrect/skipped responses coded as “0.”

Table 1 presents two sets of results: the left-most columns present the patterns for all respondents and the right-most columns show the pattern for people in the control group of the question wording experiment (i.e., those who did *not* receive instructions regarding look-up). Our discussion focuses on the results for all respondents, but the patterns are similar for the No-Instructions group.

[INSERT TABLE 1 ABOUT HERE]

In the first two columns of Table 1, respondents who gave the correct answer to one or both catch questions have higher average levels of knowledge on the traditional political knowledge scale (2.6 vs. 1.6;  $p < .01$ ) and they are more likely to receive the maximum score on the scale (20% versus 13%), contributing to a lower scale alpha. Additionally, searchers take significantly longer to answer both the traditional knowledge items and the catch questions, which is the expected pattern if a person is researching the answers. Overall, the catch questions seem effective at identifying individuals who use outside sources to answer factual knowledge questions.

In multivariate analyses (shown in the Online Appendix), *Outside Search* is positively and significantly related to a person's score on the four-item political knowledge scale ( $p < .01$ ). There is, however, a notable difference in the utility of online look-up across the individual items. In separate models for each question (see Online Appendix), *Outside Search* is positively and significantly ( $p < .01$ ) related to a correct response for the open-ended items only. Search behavior is unrelated to a person's ability to provide the correct answer to the spending question ( $p = .84$ ). There are two possible explanations for this null effect. On the one hand, the lack of a relationship could indicate that closed-ended questions are easier (because they cue recall or permit guessing), thus negating the need to look up answers. On the other hand, a null effect

could signal a difficult question that is hard to research. In the case of the 2018 Pilot Study, the second explanation seems more likely. The proportion of non-searchers providing a correct response to the closed-ended spending item was .35 [95% C.I. = .32 – .37], which was substantially *lower* than two of the three open-ended questions (Merkel, Senate Term), and roughly the same as the third item (Roberts). Not only was there a low baseline level of knowledge on the spending item, there also were only modest gains (in percent correct) among people identified as looking up the answer.

#### *Do Searchers Answer Other Questions Differently?*

If outside search on political knowledge questions stems from the desire to self-enhance, a similar pattern should appear on other items that provide a similar opportunity. Based upon the available questions in the 2018 Pilot Study, we focus on behavioral measures of political engagement. Figure 1 shows mean values on these variables for respondents who were identified as looking up the answers to the political knowledge and all other respondents. Variables have been standardized on a 0–1 scale with higher values indicating the enhancing response.

[FIGURE 1 ABOUT HERE.]

The top row of Figure 1 shows the difference in knowledge scores by search status, reproducing the key finding from Table 1. On the other items, there is a consistent pattern in which searchers self-report significantly higher levels of political engagement (all *ps* <.05 or better). By themselves, these data cannot establish whether searchers are giving dishonest responses. Someone with genuinely high levels of political engagement might feel obligated to give the correct answers to political knowledge questions (thus motivating online look-up). We probe this possibility later with the validated data, where we examine the correspondence between overreporting turnout and registration with search status. If searchers have higher actual

levels of participation, there should be no relationship between exaggerated reports of turnout/registration status and online look-up. A positive relationship, by contrast, would indicate that searchers are more likely to overreport their turnout and registration status than non-searchers.

First, however, and to rule out the possibility that searchers are more likely to answer *any* self-report item in the affirmative, we conduct a series of placebo tests (e.g., on items where we would not expect to observe differences between searchers and other respondents). In the first test, we identified questions that were self-regarding but did not permit the chance to self-enhance. Two items—one asking respondents to self-report their experience with sexual harassment and the other inquiring if they know anyone who has been addicted to opioids—were especially good candidates. If online look-up is driven by a desire to over-claim in areas related to social/political competence, we should *not* observe this response pattern on questions that ask people to acknowledge experiences with sexual harassment or opioid abuse. In line with this expectation, the mean values on these two items are indistinguishable for searchers and non-searchers ( $p = .62$  and  $.42$ , respectively). The selection of these two questions is inherently subjective, so the second placebo test samples a random 10% of items from the substantive questions on the pilot study ( $N=39$  questions) and examines whether there are significant differences between searchers and non-searchers on this larger set of items.<sup>2</sup> The overwhelming pattern is one of null effects (results shown in Online Appendix). Among the 39 randomly selected placebo items, there is a significant difference ( $p < .05$ ) in the mean value across searchers and non-searchers in eight cases, approximately the number one would expect to

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<sup>2</sup> Non-substantive items included form, order, and timing variables.

observe by chance.<sup>3</sup> The contrast between the significant differences by search status in Figure 1 and the largely null effects in the placebo tests is consistent with the interpretation that outside search is motivated by self-presentation concerns.

In our next analysis, we employ validated vote data to examine whether searchers are more likely to overreport turnout and voter registration status.<sup>4</sup> A respondent is characterized as overreporting if they self-reported turning out/being registered in the 2018 ANES Pilot Study, but were characterized by TargetSmart as *not* voting/being registered. Focusing on the subset of respondents who could plausibly overreport (i.e., those who were not validated voters/registrants; Enamorado and Imai 2019), we observe the expected pattern in which people identified as researching the answers to knowledge questions are more likely to *overreport* turnout and registration status in the pilot study relative to respondents who answered the knowledge items without searching. For example, on the question asking about turnout in the 2016 general election, 50% of searchers overreported voting compared to 38% of non-searchers ( $\chi^2 = 9.93$ ;  $p < .02$ ). The item asking about turnout in the 2018 general election has a similar pattern: 51% of searchers overreported voting compared to 41% of non-searchers ( $\chi^2 = 9.44$ ;  $p < .02$ ). Finally, 63% of searchers overreported their registration status compared to 50% of non-searchers ( $\chi^2$

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<sup>3</sup> There is little commonality across the eight items. Topics included attitudes (e.g., capitalist feeling thermometer, perceptions of corruption) as well as demographics (e.g., family income, religiosity).

<sup>4</sup> Validated vote data was provided by TargetSmart. According to those data, 44% voted in 2016, 41% voted in 2018, and 49% were registered (see DeBell et al. 2018 for a discussion of the limitations with validated data).

=10.80;  $p < .02$ ).<sup>5</sup> Overall, analyses of the validated data suggest that the higher levels of engagement and participation self-reported by searchers (Figure 1) may be more apparent than real.

#### *Who Engages in Online Look-up and Can They Be Deterred?*

Past research indicates that outside search will be common among those who value being politically knowledgeable (Clifford and Jerit 2016; Gummer and Kunz 2019). Following from studies showing that people with high levels of education strive to conform to social norms regarding political engagement (e.g., Silver et al. 1986; Bernstein et al. 2001), we estimate a model predicting online look-up and include level of education and other markers of socioeconomic status as the independent variables. By that same logic, we include a measure of news following based on the assumption that people with higher levels of self-reported news interest might feel greater pressure to give correct answers than those who do not report following the news. Finally, past work has found that younger respondents are more likely than older respondents to engage in outside search (Smith, Clifford, and Jerit 2020).

Additionally, prior to the political knowledge questions, a random half of respondents received a preamble asking them not to look up answers. We expected that respondents receiving these instructions would be less likely to engage in outside search compared to those in the control group (who received no instructions).

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<sup>5</sup> In a multivariate analysis predicting overreporting (each outcome separately or combined in a scale), search status is positively signed, but insignificant after controlling for other factors (e.g., education, news following).

The left-most portion of Table 2 reports the estimates from a logistic regression on the entire sample.<sup>6</sup> Several notable findings emerge from this analysis. First, a person's level of education and news following are positively and significantly related to search engine use (both  $ps < .05$ ). The second notable pattern concerns the effect of age. Respondents between 35 and 64 years old are more likely to look up answers relative to those 65 and older ( $p < .01$ ). Finally, the coefficient on the indicator for the treatment condition is negative and statistically significant ( $p < .01$ ). The instructions had a substantial effect—reducing aggregate levels of look-up from 25% (control group) to 15% (treatment)—but a non-trivial percentage of respondents defied those instructions.

[INSERT TABLE 2 ABOUT HERE.]

The models on the right-hand side of Table 2 present coefficient estimates across the conditions of the question wording experiment. The two most important predictors of outside search, a person's level of education and news following, drop out of significance in the instructions group ( $p = .055$  and  $p = .022$  on the difference in the effect of *Education* and *Follows* across conditions). In contrast, the instructions are ineffective in reducing look-up among younger respondents and appear to backfire to some degree. For the most part, the individuals who are the most likely to engage in outside search (those with high levels of education and news following) also are the most receptive to warnings *not* to engage in this behavior. This is an encouraging finding, but there are limitations with the analyses in Table 2. The pilot study did not include measures of personality or other stable factors that may be related to outside search (e.g., need for cognition). Thus, the results in Table 2 could change if different covariates were included.

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<sup>6</sup> Given the large sample, our discussion is restricted to findings significant at  $p < .05$  or better.

## Conclusion

The ANES 2018 Pilot Study offers a valuable opportunity to examine respondents who look up the answers to factual knowledge questions. Our analyses indicate that respondents who are identified as looking up answers to traditional political knowledge questions answer *other* questions differently. Using validated vote data, we show that searchers are more likely than non-searchers to give dishonest answers to questions about registration status and turnout behavior. Searchers also self-report significantly higher levels of political engagement more generally, though we lack validation data on those items. Fortunately, instructions inhibit outside search to some degree, and these warnings are especially effective among the respondents most likely to research answers.

Our analyses have additional implications for questionnaire design, particularly as it relates to the use of open- or closed-ended questions in online surveys. There is evidence that respondents are more likely to research the answers to open-ended questions (Shulman and Boster 2014; Gummer and Kunz 2019), and a common explanation for this pattern is that an open-ended format is inherently more difficult. Our analysis suggests the need for additional nuance. The conventional wisdom regarding differences between open- and closed-ended questions may need revision in settings where respondents can research the answers. Some questions have easily searchable answers while others do not—and this distinction may be unrelated to question format.

A second implication pertains to the validity of political knowledge measures in online surveys. For respondents who research the answers to knowledge questions, the resulting scale confounds the ability to recall facts stored in memory (Delli Carpini and Keeter 1996) with a person's skill at finding information (Prior and Lupia 2008). This blending is problematic for two reasons. First, the correlates of each component are different, with correct recall related to a

respondent's level of political interest, and the ability to find information related to a person's effort in completing the survey (Smith, Clifford, and Jerit 2020). Second, when there is no attempt to control search, knowledge scales measure something different depending on the degree to which a respondent relies on memory versus outside search. Our study, along with other recent work on this topic, highlights the need for scholars to revisit the meaning (and measurement) of political knowledge when citizens have multiple strategies for reporting what they know about politics.

## Appendix

### Question Wording for Items used in Analysis

Data come from the American National Election Studies 2018 Pilot Study (<https://electionstudies.org/>).

#### Wording for instructions in question wording experiment

Respondents were randomly assigned to receive either the following set of instructions before answering political knowledge questions or nothing:

We are interested in how much information about certain subjects gets out to the public. No one knows all the answers to the next few questions. When you are not sure, please just give your best guess. Please do not look up the answers. We want to see what people already know or can guess.

#### Political Knowledge Questions

[pk\_cjus] What job or political office is now held by John Roberts?

[pk\_germ] What job or political office is now held by Angela Merkel?

[pk\_sen] For how many years is a United States Senator elected – that is, how many years are there in one full term of office for a U.S. Senator?

[pk\_spend] On which of the following does the U.S. federal government currently spend the least?

#### Catch items

[pk\_geer] In what year did the Supreme Court of the United States decide Geer v. Connecticut?

[pk\_alaska] In what year was the Alaska Purchase Treaty signed?

#### Items that appear in Figure 1

[reg] Are you registered to vote, or not?

[turnout18] In the election held on November 6, did you definitely vote in person on election day, vote in person before Nov 6, vote by mail, did you definitely not vote, or are you not completely sure whether you voted in that election?

[house18t] How about the election for House of Representatives in Washington? Did you vote for a candidate for the U.S. House of Representatives, or did you not vote for that office?

[senate18t] How about the election for U.S. Senate? Did you vote for a candidate for the United States Senate, or did you not vote for that office?

[gov18t] How about the election for governor? Did you vote for a candidate for governor of [INPUTSTATE], or did you not vote for that office?

[turnout16] In 2016, the major candidates for president were Donald Trump for the Republicans and Hillary Clinton for the Democrats. In that election, did you definitely vote, definitely not vote, or are you not completely sure whether you voted?

[follow] Some people seem to follow what's going on in government and public affairs most of the time, whether there's an election going on or not. Others aren't that interested. Would you say you follow what's going on in government and public affairs most of the time, some of the time, only now and then, or hardly at all?

*Knowledge Scale:*

[pk\_cjus] What job or political office is now held by John Roberts?

[pk\_germ] What job or political office is now held by Angela Merkel?

[pk\_sen] For how many years is a United States Senator elected – that is, how many years are there in one full term of office for a U.S. Senator?

[pk\_spend] On which of the following does the U.S. federal government currently spend the least?

*Engage Scale:*

[meet] During the past 12 months, have you attended a meeting to talk about political or social concerns, or have you not done this in the past 12 months?

[givefut] During the past 12 months, have you given money to an organization concerned with a political or social issue, or have you not done this in the past 12 months?

[march1]/ [march2] During the past 12 months, have you joined in a protest march, rally, or demonstration, or have you not done this in the past 12 months?/ During the past 12 months, have you joined in a political march, rally, or demonstration, or have you not done this in the past 12 months?

[online] During the past 12 months, have you posted a message or comment online about a political issue or campaign, or have you not done this in the past 12 months?

[persuade] During the past 12 months, have you tried to persuade anyone to vote one way or another, or have you not done this in the past 12 months?

[sign] During the past 12 months, have you worn a campaign button, put a campaign sticker on your car, or placed a sign in your window or in front of your house, or have you not done this in the past 12 months?

[give] During the past 12 months, have you given money to any candidate running for public office, any political party, or any other group that supported or opposed candidates, or have you not done this in the past 12 months?

Items from placebo tests

[disc\_selfsex] How much discrimination have you personally experienced because of your sex or gender?

[knowopioid] Do you know anyone who has had an addiction to pain-killers or opioid drugs, or do you not know anyone who has had that kind of addiction?

[addtime] How long have you lived at your current address?

[ftwhite] How would you rate whites?

[ftthisp] How would you rate Hispanics?

[ftcapitalists] How would you rate capitalists?

[fttrans] How would you rate transgender people?

[ftmueller] How would you rate Special Counsel Robert Mueller?

[ftfbi] How would you rate the Federal Bureau of Investigation (FBI)?

[ftscotus] How would you rate the U.S. Supreme Court?

- [phnatdis] Which party, the Democrats or the Republicans, would better handle each of the following issues, or is there no difference? Natural disasters
- [dtafraid] Think about Donald Trump. How often would you say you've felt each of the following ways because of the kind of person Donald Trump is or because of something he has done? Afraid?
- [imbitter] Think about immigrants coming from other countries to live in the United States. How often would you say you've felt each of the following ways because of immigrants coming from other countries to live in the United States? Bitter?
- [imsick] Think about immigrants coming from other countries to live in the United States. How often would you say you've felt each of the following ways because of immigrants coming from other countries to live in the United States? Sickened?
- [improve1]/[improve2] When it comes to people trying to improve their financial well-being, do you think it is now easier, harder, or the same as it was 20 years ago?
- [indirect2] When an organization spends \$[AMOUNT\_IND] on advertising to support a candidate for Congress, how much does that candidate respond by supporting laws to benefit that organization?
- [harass] Now, thinking about the increasing attention to sexual harassment in the workplace, which statement best describes what you think?  
 "It has gone too far and is calling into question all interactions between men and women in the workplace, which will hurt people's ability to do their jobs." Or:  
 "It is an appropriate response to a problem that has been ignored for too long and addressing it will help women in the workplace."
- [whiteid] How important is being White to your identity?
- [illimcrime] Does illegal immigration increase, decrease, or have no effect on the crime rate in the U.S.?
- [acaapprove] Do you approve or disapprove of the Affordable Care Act of 2010, sometimes called Obamacare?
- [loseins] How concerned are you about losing your health insurance in the next year?
- [warmdo] Do you think the federal government should be doing more about (rising temperatures/climate change), should be doing less, or is it currently doing the right amount?
- [tariff\_con] Do you think raising tariffs and barriers to imports from other countries will mostly help American consumers, mostly hurt American consumers, or will it have no effect on consumers?
- [guncheck] Do you favor, oppose, or neither favor nor oppose requiring background checks for gun purchases at gun shows or other private sales?
- [sd3] How important are each of the following to the United States maintaining a strong democracy? The executive, legislative, and judicial branches of government keep one another from having too much power
- [sd4] How important are each of the following to the United States maintaining a strong democracy? Elected officials face serious consequences if they engage in misconduct
- [media1] The news media—such as newspapers, TV, and radio— have historically had a role in checking the powers of the U.S. government by covering what is happening so the public can be well-informed. How important is it to you that the media play this role?

[media2] How effective do you think the news media are today in this role?

[mediaviol] How concerned are you about violence against people who work in the news media?

[impeach1] Based on what you know today, do you favor, oppose, or neither favor nor oppose the U.S. House of Representatives voting to impeach President Trump?

[dem\_activduty] Are you now serving on active duty in the U.S. armed forces -- the U.S. Air Force, Army, Coast Guard, Marine Corps, or Navy -- or have you previously served on active duty in the U.S. armed forces, or have you never served on active duty in the U.S. armed forces?

[gender] Are you male or female? [profile variable]

[marstat] What is your marital status? [profile variable]

[child18] Children under age 18 in household [profile variable]

[faminc\_new] Family income [profile variable]

[religpew] What is your present religion, if any? [profile variable]

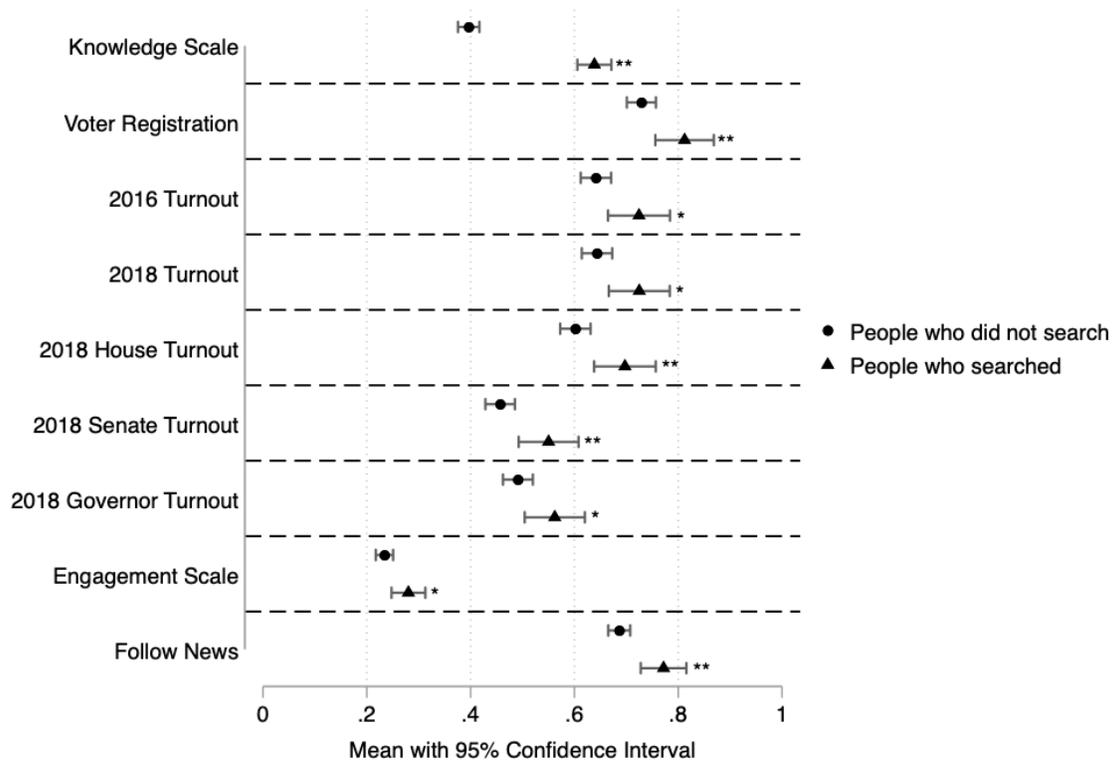
[race] What racial or ethnic group describes you? [profile variable]

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**Figure 1. Level of Political Engagement by Search Status.**



*Note.* Mean Level of Engagement with 95% Confidence Interval. \*\*  $p < .01$ ; \*  $p < .05$  (two-tailed)

**Table 1. Comparing Response Patterns among Respondents Who Do and Do Not Engage in Outside Search**

	<u>All Respondents</u>		<u>No Instructions Group*</u>	
	R does <i>not</i> look up answer (n=2000)	R does look up answer (n=500)	R does <i>not</i> look up answer (n=950)	R does look up answer (n=313)
Mean score on 4-point knowledge scale	1.6	2.6	1.6	2.7
% Receiving maximum score on scale	13%	20%	13%	25%
Scale Alpha	.77	.60	.78	.59
Time to answer:				
Open-end John Roberts	23 seconds	39 seconds	20 seconds	42 seconds
Open-end Angela Merkel	19 seconds	31 seconds	18 seconds	29 seconds
Open-end Length Senate Term	14 seconds	29 seconds	13 seconds	30 seconds
Closed-end Government Spending	16 seconds	23 seconds	15 seconds	24 seconds
Catch Question #1: Geer	16 seconds	47 seconds	15 seconds	45 seconds
Catch Question #2: Alaska	14 seconds	36 seconds	13 seconds	38 seconds

**NOTE.** — Look-up identified with catch questions. Differences in score and timing variables are statistically significant ( $p < .05$  two-tailed). \* Respondents in the control condition of the question wording experiment (see text for details).

**SOURCE.** — American National Election Studies 2018 Pilot Study.

**Table 2. Net Effects on the Probability of Online Look-up**

Independent Variables	Entire Sample (n=2500)		Control Group (n=1263)		Received Instructions Not to Search (n=1237)	
	coef.	s.e.	coef.	s.e.	coef.	s.e.
Follows politics	.66	.29*	.86	.36*	.34	.46
Education	.71	.26**	1.07	.33**	.26	.41
Female	-.06	.14	.12	.17	-.40	.22#
White	-.19	.16	-.04	.20	-.37	.24
Income	.50	.32	.46	.43	.52	.48
Income Not Reported	.39	.21#	.35	.25	.34	.34
Age < =34	.39	.21#	.27	.27	.71	.33*
Age 35 to 64	.57	.17**	.44	.22*	.89	.27**
Instructions Not to Search	-.64	.14**				
Constant	-2.41	.33**	-2.82	.46**	-2.60	.47**
F value	7.52		4.56		3.06	
Prob > F	.00		.00		.00	

**NOTE.** — Entries are logistic regression coefficients and standard errors. Models employ weighted data. The dependent variable is coded “1” if a respondent gave the correct answer to one or both catch questions. Independent variables are standardized to the 0–1 scale. \*\*  $p < .01$ ; \*  $p < .05$ ; #  $p < .10$  (two-tailed)

**SOURCE.** — American National Election Studies 2018 Pilot Study.

## Online Appendix Materials

for

“Does it Matter if Respondents Look Up Answers to Political Knowledge Questions?”  
Style and Jerit

**Table A1. Model Predicting Factual Political Knowledge**

	Without Term for Search		With Term for Search	
	Coefficient	S.E.	Coefficient	S.E.
Follows politics	1.50	.11 **	1.45	.10 **
Education	1.24	.12 **	1.16	.12 **
Female	-0.47	.06 **	-0.47	.06 **
White	0.12	.07 #	0.14	.07 *
Income	0.83	.16 **	0.77	.15 **
Income Not Reported	0.30	.10 **	0.27	.09 **
Age	0.45	.11 **	0.45	.11 **
Married	-0.12	.06 #	-0.11	.06 #
South	-0.06	.06	-0.05	.06
Party strength	0.05	.03 #	0.04	.02 #
Outside Search			0.65	.08 **
Constant	-0.16	0.11	-0.22	.10 *
N	2500		2500	
Adjusted R-squared	.42		.45	

Note: Entries are OLS coefficients and standard errors. Independent variables standardized to 0-1 scale (Knowledge ranges from 0 to 4). Model specification based on Delli Carpini and Keeter (1996). \*\*  $p < .01$  \*  $p < .05$  #  $p < .10$

**Table A2. Predicting Correct Answer to Individual Knowledge Items**

	Chief Justice		German Chancellor		Senate Term		Government Spending	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Follows politics	0.40	.03 **	0.51	.04 **	0.31	.04 **	0.23	.04 **
Education	0.27	.04 **	0.32	.04 **	0.33	.04 **	0.24	.05 **
Female	-0.09	.02 **	-0.10	.02 **	-0.12	.02 **	-0.15	.02 **
White	0.10	.02 **	0.05	.02 *	0.03	.03	-0.04	.03
Income	0.22	.05 **	0.24	.06 **	0.20	.06 **	0.12	.07 #
Income Not Reported	0.04	.03	0.08	.04 *	0.06	.03	0.10	.04 *
Age	0.11	.04 **	0.20	.04 **	0.16	.04 **	-0.02	.04
Married	-0.02	.02	0.00	.02	-0.01	.02	-0.08	.02 **
South	0.00	.02	-0.01	.02	-0.04	.02	-0.01	.02
Party strength	0.00	.01	0.01	.01	0.01	.01	0.02	.01
Outside Search	0.21	0.03 **	0.19	.03 **	0.26	.03 **	-0.01	.03
Constant	-0.20	0.03 **	-0.17	.04 **	-0.01	.04	0.16	.04
N	2500		2500		2500		2500	
Adjusted R-squared	.37		.40		.28		.12	

Note: Entries are OLS coefficients and standard errors. Independent variables standardized to 0-1 scale (Knowledge ranges from 0 to 4).

\*\*  $p < .01$  \*  $p < .05$  #  $p < .10$

**Table A3. Placebo Tests for Differences between Searchers and Non-Searchers**

Variable	Mean for Non-Searchers	Mean for Searchers	p-value on difference	
Experienced discrimination	2.11	2.15	.62	
Know someone with addiction	1.61	1.63	.42	
Time at current address	2.38	2.52	.00	*
Feeling thermometer whites	68.42	70.89	.13	
Feeling thermometer Hispanics	67.60	71.15	.07	#
Feeling thermometer capitalists	49.73	55.38	.00	*
Feeling thermometer transgender people	53.03	53.41	.87	
Feeling thermometer Special Counsel Robert Mueller	50.52	49.61	.69	
Feeling thermometer Federal Bureau of Investigation (FBI)	57.74	55.58	.24	
Feeling thermometer U.S. Supreme Court	56.34	57.68	.52	
Which party would better handle health care	1.80	1.88	.16	
Which party would better handle natural disasters	1.85	1.88	.50	
How often felt afraid because of Trump <sup>a</sup>	2.57	2.21	.01	*
How often felt bitter because of immigrants coming to US <sup>a</sup>	1.79	1.72	.51	
How often felt sickened because of immigrants coming to US <sup>a</sup>	1.86	1.77	.36	
Improving financial well-being harder, easier, or the same as 20 years ago <sup>a</sup>	4.65	4.49	.35	
Improving financial well-being harder, easier, or the same as 20 years ago <sup>a</sup>	4.66	4.70	.80	
How much does a candidate support laws that benefit and organization that spent money advertising for that candidate <sup>a</sup>	2.93	2.69	.04	*
Has increasing attention to sexual harassment in the workplace gone too far or is it an appropriate response	1.50	1.45	.11	
How important is being white to your identity <sup>a</sup>	2.35	2.23	.22	
Does illegal immigration increase, decrease or have no effect on crime rate in the US	3.12	2.82	.00	*
Approve or disapprove of the Affordable Care Act of 2010	3.98	4.09	.45	
How concerned about losing health insurance in the next year	2.28	2.18	.28	
Should the government be doing more or less about rising temperatures/climate change	1.63	1.56	.13	#
Will raising tariffs and barriers to imports help, hurt or have no effect on American consumers	4.56	4.53	.77	
Favor or oppose requiring background checks for gun purchases at gun shows or other private sales	2.38	2.24	.23	
Importance of the executive, legislative, and judicial branches of government keep one another from having too much power <sup>a</sup>	4.00	4.00	.98	
Importance of elected officials face serious consequences if they engage in misconduct	4.12	4.10	.89	
Importance of media checking powers of the US government by keeping public well-informed	3.51	3.51	1.00	
Effectiveness of the news media today in this role	2.68	2.45	.01	*
How concerned about violence against people who work in the news media	2.91	2.73	.06	#
Favor, oppose, or neither favor nor oppose the U.S. House of Representatives voting to impeach President Trump	3.98	4.17	.22	
Currently, previously, or never served on active duty in the US armed forces?	2.80	2.82	.47	
Gender	1.52	1.50	.62	
Marital Status	2.96	2.96	.99	
Children under 18 in household	1.74	1.76	.63	
Family income	5.52	6.47	.00	*
Religion	5.48	4.83	.03	*
Race	1.73	1.79	.50	

Note: Difference computed using adjusted Wald test on weighted data. Full sample was used in all cases except for split ballot/order experiments (denoted above with <sup>a</sup>). \*  $p < .05$  #  $p < .10$