Partisanship, Political Knowledge, and the Dunning-Kruger Effect

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Abstract: A widely-cited finding in social psychology holds that individuals with low levels of competence will judge themselves to be higher-achieving than they really are. In the present study, I examine how the so-called 'Dunning-Kruger effect' conditions citizens' perceptions of political knowledgeability. While low performers on a political knowledge task are expected to engage in overconfident self-placement and self-assessment when reflecting on their performance, I also expect the increased salience of partisan identities to exacerbate this phenomenon due to the effects of directional motivated reasoning. Survey experimental results confirm the Dunning-Kruger effect in the realm of political knowledge. They also show that individuals with moderately low political expertise rate themselves as increasingly politically knowledgeable when partisan identities are made salient. This below-average group is also likely to rely on partisan source cues to evaluate the political knowledge of peers. In a concluding section, I comment on the meaning of these findings for contemporary debates about rational ignorance, motivated reasoning, and political polarization.
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A widely-studied phenomenon in social psychology holds that individuals with low levels of competence will judge themselves to be more competent than they really are, while those with high levels of competence will underestimate their excellence (see also Dunning, 2011; Ehrlinger, Gilovich, & Ross, 2005; Kruger & Dunning, 1999). This so-called Dunning-Kruger effect is composed of several interrelated phenomena, thought to occur because individuals vary in their awareness of "known unknowns" (concepts, skills, or experiences that one is aware of, but which have not yet been mastered) relative to "unknown unknowns" (which fall outside of an individual's cognizance). As a result, low achievers are unaware of the extent of their ignorance because they are lacking in metacognitive skills (e.g., Everson & Tobias, 1998).

This "double burden of incompetence" (Dunning, 2011, p. 260) means that low-performing individuals often overestimate their own objective performance. A second and related aspect of the Dunning-Kruger effect is that these low-achievers will be less capable of rating and comparing peers' performances (Helzer & Dunning, 2012; Hodges, Regehr, & Martin, 2001). Paradoxically, these phenomena combine to affect the ability of low achievers to overcome their incompetence, because they are unaware that they lag behind others until their objective performance is measured and reported to them. The only way to increase proficiency is to increase metacognition, and vice versa (Kruger & Dunning, 1999).

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2 Critics of the Dunning-Kruger effect have argued that the phenomenon is most likely to occur not because individuals lack metacomprehension, but rather because their preexisting knowledge is biased (e.g., Krajc & Ortmann, 2008). Further empirical demonstrations have shown that individuals' overconfident self-assessments are not a product of the distribution of task scores or other statistical artifacts (Schlösser, Dunning, Johnson, & Kruger, 2013).

3 The Dunning-Kruger thesis also holds that top performers on tasks are likely to discount their exceptionalism, rating themselves as lower-achieving than they should (e.g., Schlösser et al., 2013).
The phenomena which comprise the Dunning-Kruger effect have substantial consequences for contemporary theories of political knowledge. Political knowledge informs the perceived social utility of engaging in political discussion (David, 2009; Eveland Jr, 2002; Neuman, 1986), whether to seek additional knowledge from preferred sources (e.g., Cowen, 2005; Redlawsk, 2004), and whether to adopt ideologically extreme positions (Ortoleva & Snowberg, 2015a). Overconfident citizens may become emboldened, making strong political assertions in their social networks and resisting persuasive counterarguments. Despite these potentially important consequences, modern political scientists have only occasionally examined the subjects of political over- and underconfidence, and have never engaged in a direct test of the Dunning-Kruger effect.

Overconfidence may also influence the way that partisans assess the political knowledge of others (Leeper & Slothuus, 2014). Partisanship causes individuals to raise "perceptual screens" which increase the likelihood of believing congenial partisan stereotypes, and which also reduce partisans' willingness to believe disconfirming narratives (e.g., Kunda, 1990). This motivated reasoning process causes partisans to possess biased characterizations of the political knowledge of out-group and in-group members, and may lead to increases in overconfidence when partisanship is made salient. Existing literature therefore identifies two important outstanding research questions. First, to what extent do contemporary Americans overestimate their levels of

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4 By confidence in political knowledge, I do not refer to political efficacy, which instead relates to the feeling that political action is possible and impactful (Balch, 1974; Campbell, Gurin, & Miller, 1954).

5 A JSTOR search of major political science journals and a Google Scholar keyword search for "dunning" produced several articles which mention the theory (e.g., Cowen, 2005; Lassen & Serritzlew, 2011; Weissberg, 2001), but no study incorporated its expectations in a research design.
political knowledge? And perhaps more important given the increasingly-polarized context of contemporary political discourse: *how do partisan identities condition this phenomenon?*

In the present study, I examine political overconfidence using a survey experimental research design. Two online survey experiments designed to measure political knowledge corroborate the original Dunning-Kruger effect in the realms of self-assessment, self-placement, and peer assessment. Further, the studies experimentally manipulate the salience of partisanship in the minds of respondents by priming partisanship through simple cues (Bullock, 2011; e.g., Klar, 2013). Results show that the increased salience of partisanship exacerbates gaps between perceived and actual levels of political knowledge---but only among partisans with moderately low performance on the knowledge battery. Party cues also interfere with these low-performing partisans' ability to accurately assess the political knowledge of in- and out-party peers. Higher-achieving and extremely low-achieving respondents, in contrast, are relatively unresponsive to party cues. In a concluding section, I comment on the meaning of these findings for contemporary theories of political knowledge, partisan motivated reasoning, and political engagement.

**Political Overconfidence**

Across the disciplines, a multitude of studies has sought to measure overconfidence on objective task performance. Scholars have largely focused on three types of self-evaluation. Perhaps the most popular subject of study is *over-estimation*, in which individuals feel their performance on a task is better than it actually is (e.g., Sheldon, Dunning, & Ames, 2014). Over-placement, or
the "Lake Wobegon" effect, in which individuals rate their performance as higher than average, is also an important subject in prior literature (Dunning, Heath, & Suls, 2004; e.g., Svenson, 1981). Finally, studies of over-precision show that many individuals believe they possess more accurate information about a concept than they actually do (Ortoleva & Snowberg, 2015a; e.g., Soll & Klayman, 2004).

Despite these many advances, no existing study of political knowledge has appraised over-estimation or over-placement from the perspective of the Dunning-Kruger framework. Some extant research designs have examined political over-precision from a cross-sectional perspective: Ortoleva & Snowberg (2015a) examine this aspect of overconfidence as a predictor of ideological extremeness and strength of partisanship. The authors develop a theory of imperfect information processing which demonstrates a "correlational neglect" phenomenon, in which citizens fail to recognize and compensate for the fact that their own experiences are not highly informative of the consequences of public policy. As a result, those who suffer from correlational neglect will exhibit strengthened partisanship, ideological extremism, and increased voter turnout (Ansolabehere, Meredith, & Snowberg, 2014; see also Ortoleva & Snowberg, 2015b).

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6 On Prairie Home Companion, Garrison Keillor would introduce the fictional town of Lake Wobegon, Minnesota as a place where "the women are strong, the men are good looking, and all the children are above average".

7 Political knowledge has been variously defined since the advent of modern political behavior research. It can be differentiated from political sophistication, a more encompassing concept which relates to knowledge, awareness, and ideological constraint (e.g., Converse, 1964; Luskin, 1990). According to Luskin (1990, 332), "a person is politically sophisticated to the extent to which his or her political cognitions are numerous, cut a wide substantive swath, and are highly organized, or constrained." A more concise description in this vein is political expertise.
A second strand of political science literature has investigated the link between certainty and knowledgeability in the political realm. The majority of such studies has examined the relationship between confidence in political perceptions and opinions on policies. Druckman (2004) shows that those citizens who are most susceptible to framing efforts are often highly confident in their political beliefs—a finding that squares well with existing research on the Dunning-Kruger effect. Pasek, Sood, & Krosnick (2015) examine perceptions of the Affordable Care Act, showing that citizens with incorrect knowledge of the law can be further subdivided into those proferring uncertain and certain responses (Kuklinski & Quirk, 2001; see also Kuklinski, Quirk, Jerit, Schwieder, & Rich, 2000). The authors argue that confidently incorrect individuals should be construed as possessing misperceptions, while uncertain respondents acknowledge that they lack the relevant political knowledge to make claims about an issue. This line of reasoning resonates with recent work on the causes and consequences of political misperceptions (Flynn, Nyhan, & Reifler, 2017; Jerit, Barabas, & Bolsen, 2006; Nyhan & Reifler, 2010; Prasad et al., 2009).

Taking these findings from social psychology and political science together, we would expect citizens' self-assessments of political knowledge to correspondingly deviate from their objective performance on political knowledge batteries. But according to the Dunning-Kruger thesis, this pattern should be especially evident among those with low levels of political knowledge. These

8 For a tangential literature on the measurement of political knowledge giving the proclivity of unsure respondents to select "don't know" as a response to survey questions, see Mondak & Davis (2001) and Mondak & Anderson (2004).

9 Gvirsman (2015) also examines how political knowledge conditions 'false projection,' a phenomenon in which individuals use their own beliefs about a political controversy to inform their assessments of majority public opinion on the issue (in this case, dismantling of Israeli settlements in Palestinian territories.)
citizens will lack metacognitive awareness in their political lives, as they are unaware of the "unknown unknowns" that constitute sophistication in the political realm. This phenomenon is likely exacerbated by the prevalence of civic norms of engagement and participation in contemporary American society (e.g., Galston, 2001; Theiss-Morse & Hibbing, 2005). Many citizens will feel remiss to admit to themselves that they possess low levels of civic competence because such deficiencies are socially undesirable. But in addition to these norms, low achievers on political knowledge tests may be chronically lacking in opportunities to engage in discourse with knowledgeable peers about politics (Eveland Jr. & Hively, 2009; La Due Lake & Huckfeldt, 1998), which, according to the Dunning-Kruger thesis, may have otherwise led them to overcome the "double burden of incompetence" that characterizes a lack of metacognitive ability (Kruger & Dunning, 1999). Thus, we should expect the over-placement component of the Dunning-Kruger effect to extend to the realm of political knowledge:

- **H1 (Self-Placement):** *When asked to report their performance relative to peers on a political knowledge battery, low achievers will consistently rank themselves as above average.*

However, one salient consideration leads to different theoretical expectations for a political Dunning-Kruger effect when compared to more general learning and task performance applications: many Americans possess partisan identities which could interfere with accurate self-assessment and self-placement of political knowledgeability.

**Partisan Stereotypes, Over-Estimation, and Over-Placement**

Social context has been found to condition the Dunning-Kruger effect across a wide variety of performance tasks, as an individual's socially-constructed self-image informs their level of over-
or underconfidence due to the prevalence of stereotypes about in- and out-groups (Ariely & Norton, 2007; Camerer, Hogarth, Budescu, & Eckel, 1999; McGlone & Aronson, 2006; McGlone, Aronson, & Kobrynowicz, 2006). One important class of such "stereotype threats" encompasses racial and gender identities. For example, women are often susceptible to prevalent stereotypes about the gender gap in science education, such that priming gender results in a meaningful reduction of confidence in women's self-perceptions on science exams (Dunning, Johnson, Ehrlinger, & Kruger, 2003). Similarly, priming minority identities results in greater anxiety and negative self-perception among members of these groups when performing a variety of tasks (e.g., Steele & Aronson, 1995). Because participants in Dunning-Kruger experiments are sensitive to the preservation of feelings of self-worth in the face of threatening social contexts, their self-placement and self-assessment can be strongly conditioned by the activation of social identities.

Political identities are also likely to play an important role in self-assessments of political knowledge. In the realm of factual perceptions, the motivated reasoning framework shows that partisans are often unreliable reporters of objective reality (Jerit & Barabas, 2012; Kunda, 1990; Mele, 1997). This is due in large part to the way that partisans acquire information about current events and conditions. When partisans engage with new political content, they are driven by both directional and accuracy goals (e.g., Leeper & Slothuus, 2014). In order to serve directional (partisan-motivated) considerations, partisans develop and maintain a 'preferred-world state' which operates through wishful thinking in the realm of predictions and assessments (Babad,

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10 A separate literature in political science has debated a gender gap in political knowledge. See Dolan (2011) for a partial review.
This preferred interpretation of reality causes partisans to develop a set of beliefs which contrast with objective appraisals of reality. Interpretations of objective facts aside, motivated reasoning can also strongly influence partisans' perceptions of the characteristics of in- and out-party group members (e.g., Huddy, 2002; Rahn, 1993). Iyengar & Westwood (2015) demonstrate that in recent years, partisan stereotyping has increased such that partisans often hold remarkably hostile feelings for the opposition (so-called 'negative partisanship'). This party stereotyping phenomenon means that individuals will engage in greater directional reasoning if they possess enough awareness to realize that their partisan identity is meaningful to a particular social interaction (Bolsen, Druckman, & Cook, 2014; Nicholson, 2011, 2012). Party identities can be made more salient simply by mention of partisan in- and out-groups, or by making reference to recognizable party leaders. When partisans expend cognitive resources in service of a task, they will become even more likely to turn to partisan stereotypes to inform their behavior, if cues are available to them. They will also become resistant to new information which could otherwise contradict deleterious party stereotypes (e.g., Nyhan & Reifler, 2010).

The Dunning-Kruger effect is likely to be exacerbated by the salience of party cues, both in terms of self-placement and in evaluations of others' performance. When partisans access schema related to their political identities, they are also likely to be reminded of political knowledgeability as a criterion for judging the qualities of political in- and out-groups. As the partisan "preferred world state" holds that in-group partisans are politically knowledgeable relative to the out-group (among a host of other indicators of competence), partisans will become more defensive of their self-placement when asked to reflect on their political knowledge. Even if partisans can extract a signal about their performance from the task itself, such directional
considerations may come to overwhelm disconfirming performance signals. This process is analogous to situations in which partisans reject disconfirming information that is damaging to an in-group political incumbent in favor of more congenial facts (e.g., Anson, 2016; Bisgaard, 2015).

• H2 (Party Cues and Self-Evaluation): *When partisan identities are made salient through partisan cueing, subjects will exhibit increased evidence of over-estimation and over-placement relative to the control group.*

While directional motivated reasoning might influence self-appraisals in the aggregate for these reasons, it is those who are *moderately low* in political knowledge who are expected to most strongly condition their self-placement and peer assessments in response to the increasing salience of partisanship. This expectation derives from the notion that the unsophisticated will struggle to extract performance signals from their performance. The Dunning-Kruger thesis holds that low achievers fail to accurately self-place due to an inability to engage in metacognitive reflection on their performance. Those with extremely low levels of political knowledge are likely to be unaffected by party cues entirely, because they will be incapable of associating task performance with partisan threat. In this case, self-placement will stem from neither directional goals nor metacognition---an entirely 'uneducated guess' which entertains neither party cues nor performance signals. Higher achievers are also likely unaffected by stronger accuracy signal due to their good understanding of what constitutes successful task performance. The moderately low-achieving group, in contrast to very low and high achievers, is most willing to rely upon directional motivations in the face of partisan priming. This group cannot assess performance using knowledge about the task itself, but its members do understand the socially undesirable implications of low performance (e.g., Leeper & Slothuus, 2014).
dearth of interpretable evidence allows directional motivated reasoning to occupy a more central role in the formation of these low-achievers’ perceptions of performance. We should therefore expect a pattern in which partisan cueing causes overconfident self-placement to increase among partisans with moderately low levels of objective performance.

- **H3a (Task Performance-Cue Interaction):** *When partisan identities are made salient through a party cue, moderately low-scoring individuals will be most likely to exhibit heightened levels of over-estimation and over-placement relative to control groups.*

- **H3b (Task Performance-Cue Interaction):** *When partisan identities are made salient through a party cue, very low-scoring individuals will be unlikely to exhibit heightened levels of over-estimation and over-placement relative to control groups.*

- **H3c (Task Performance-Cue Interaction):** *When partisan identities are made salient through a party cue, average and high-performing individuals will be unlikely to exhibit heightened levels of over-estimation and over-placement relative to control groups.*

In addition, when evaluating peer performance, partisan source cues should most strongly influence peer performance assessments among this moderately low-achieving group as well. Kruger & Dunning (1999) posit that such subjects will be unable to correctly place the performance of peers when provided with examples, because they cannot recognize when peer performance is of high or low quality relative to their own. Low-achieving Republicans and Democrats will make stereotype-driven assumptions about the comparative quality of their own responses relative to a partisan peer. This is because moderately low-performing partisans, having the ability to employ source cues to assess peer quality, will assume that if their responses differ from an out-group peer, they are more likely to be correct than the peer. In this case the
peer is assumed to be stereotypically deficient in political knowledge. Likewise, if an in-group peer's responses differ from their own, they will be more likely to consider the possibility that the peer is more knowledgeable than they are (as in-group peers are assumed to be knowledgeable).

These biases will be stronger when a respondent has guessed on most of the knowledge questions, as they will have fewer opportunities to extract a performance signal by comparing across responses they know to be correct. But when the respondent exhibits extremely low achievement on the knowledge battery, they will also be less likely to respond to party cues due to their complete lack of political sophistication. As discussed above, such respondents will possess neither performance signals nor the ability to interpret cues which fill in for this information. The result will be mere guesswork characterized by high variance.

In contrast, those with a strong understanding of objective performance will possess a much more direct performance signal than a reliance upon in- and out-group stereotypes, and will be capable of making accuracy-driven assessments of peer performance which can obscure or counteract the effects of directional motivated reasoning. Taken together, we again expect a situation in which moderately low-performing respondents will be most likely to use party cues to assess peer performance:

- **H4a (Moderately Low-Performance Peer Evaluation):** When moderately low-scoring partisans are made aware of the in-group (out-group) partisan identity of a fictional high-achieving peer, their assessments of peer performance will increase (decrease).

- **H4b (Very Low-Performance Peer Evaluation):** When very low-scoring partisans are made aware of the in-group or out-group partisan identity of a fictional high-achieving peer, their assessments of peer performance will be unchanged.
• H4c (High-Performance Peer Evaluation): When high-and average-scoring partisans are made aware of the in-group or out-group partisan identity of a fictional high-achieving peer, their assessments of peer performance will be unchanged.

Overall, then, we have assembled a series of expectations which posit biases in the ways that contemporary Americans estimate the extent of their political knowledge—especially among those with below-average levels of political knowledge. In order to test the existence of such patterns, it is necessary to create a research design which measures both the objective performance and the self-assessments of citizens, while simultaneously manipulating the salience of political identities. Below, I introduce a methodology designed to accomplish these tasks.

Research Design

While most tests of the Dunning-Kruger effect have been performed using undergraduate student samples in laboratory settings, some studies have replicated the effect using online samples (e.g., Schlösser et al., 2013). In the present study, I engage in two tests of the Dunning-Kruger effect using large samples of online survey respondents recruited in April and June of 2017. The first sample was recruited using Qualtrics' qBus omnibus program, comprising 1,047 respondents in total. Qualtrics qBus surveys are online omnibus instruments which recruit panelists from actively-managed social media platforms into large-scale national convenience samples for corporate and academic applications. Panelists' demographics resemble Census estimates of age, gender, income, race and education (see the Supplementary Information, hereafter SI, for

11 This approach is also consistent with prior research on political knowledge and certainty (e.g., Pasek et al., 2015).
Respondents to both surveys completed a political knowledge quiz, which asked five questions designed to tap knowledge of basic political institutions, awareness of current political conditions, and ideological differentiation (e.g., Luskin, 1990). These questions were modeled after standard knowledge batteries found in recent iterations of the American National Election Study (American National Election Studies, 2016). See the SI for a closer examination of this question battery. Following Prior, Sood, & Khanna (2015), a preamble first assuaged respondents not to worry about their performance (while instructing them not to cheat): "Please try to answer this Political Quiz to the best of your ability. There is NO penalty for incorrect answers." Basic institutional knowledge was assessed using questions which asked respondents to identify the number of years served by a Senator, as well as the name of the current Secretary of Energy, from four possibilities. Ideological differentiation was assessed by asking respondents to identify which party is more conservative on the issue of healthcare. Respondents were also asked which political party currently controls the House of Representatives, and on which of four different programs the Federal government spends the least. Together, these questions form an additive scale of political knowledge which ranges from 0 to 5. See the SI for a more detailed discussion.

\[12\text{ An ongoing debate in the social sciences has questioned the validity of results derived from MTurk workers. However, the majority of this literature is optimistic regarding the attention levels, effort, and generalizability of data drawn from MTurk samples (e.g., Berinsky, Huber, & Lenz, 2012; Levay, Freese, & Druckman, 2016). Further, additional literature has recently shown that poststratification weights can be applied to MTurk samples to help assuage concerns of unrepresentativeness (Huff & Tingley, 2015).}\]
In Study 1, immediately following the political knowledge battery, respondents were divided into two groups. The control group performed a simple ordering task designed to take approximately the same amount of time as the treatment group, to assuage concerns that the treated group would experience increased satisficing due to the length of the treatment (Krosnick, 1991). The treatment group was instead exposed to a univalent partisan priming task modeled after recent studies by Klar (2013) and Lavine, Johnston, & Steenbergen (2012). The task asked respondents to "think about Americans who identify as members of the two major political parties," and to select attributes which they associate with partisan groups. These words include positive considerations such as "intelligent," "compassionate," and "hardworking," in addition to those with negative valence, such as "irresponsible" and "misguided." This priming cue is designed to heighten the salience of partisanship in the minds of the treated group relative to other identities.

After treatment exposure, groups were asked to provide a self-assessment of their mastery of the knowledge battery ("excellent," "very good," "good," "fair," or "poor"), and to rate their performance relative to others who had taken the test (self-placement) by identifying their perceived performance quintile.

Study 2's design similarly exposed respondents to the political knowledge battery and subsequently measured their self-assessment and self-placement. However, after completing this self-assessment, subjects were next asked to evaluate the performance of another (fictional) respondent. This design follows the work of Hodges et al. (2001), who use a similar "grading" task to demonstrate that those with low performance were also poor evaluators of the performance of peers. The fictional respondent's answers were presented to the subject in tandem

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13 Respondents were asked to rank the size of various common objects from largest to smallest.
with basic demographic information, including age, gender, and political partisanship. These vignettes were randomly varied to identify the fictional respondent as either a Republican or a Democrat, reflecting not a univalent party priming cue, but a simple affiliation-based source cue (Bullock, 2011; Goren, Federico, & Kittilson, 2009). After reading through the respondent's answers, subjects were asked to evaluate the fictional respondent's performance on the battery. In both studies partisanship was measured on a seven-point scale, following the standard ANES question wording (American National Election Studies, 2016). Leaning partisans were included in Republican and Democratic groups (e.g., Klar & Krupnikov, 2016). Party identification was measured prior to a distractor task battery and subsequent treatment exposure, in keeping with recent literature cautioning against stratifying on post-treatment covariates (Montgomery, Nyhan, & Torres, 2016). For more information on question wording and experimental design, see the SI.

Treatment-control contrasts are measured in the aggregate using a simple t-test design, in addition to an interactive model which measures treatment effects across task performance quartile in Study 1. In Study 2, an interactive model estimates the effects of the treatments on the outcomes of interest across task performance and partisanship. For ease of interpretation, subgroup results are also presented using simple t-test comparisons; full models are presented in the SI.

14 Consistent with Franco, Malhotra, Simonovits, & Zigerell (2017), survey weights are not employed in the findings presented below; poststratification-weighted results are robust to these findings.
Study 1: A Political Dunning-Kruger Effect

Study 1 examines H1-H3 using data from the 2017 qBus sample (N = 1,047). The results of this study corroborate the original findings of Kruger & Dunning (1999), by demonstrating that on average, individuals with low scores on the political knowledge battery substantially overestimate the perceived quality of their performance and their perceived performance relative to others. Before examining the effects of party cues on this pattern, I assess the objective performance of respondents on the political knowledge battery. Below, Fig. 1 demonstrates the distribution of the number of correct responses achieved by the 2017 qBus sample.

[Fig. 1 about here].

The task was designed to be difficult to master, an expectation that we see fulfilled in Fig. 1 above. Only around 10.6% of the sample correctly answered all five questions, while the modal score was 3 correct responses (26.9% of the sample). The mean score on the test was 2.63 out of five. But to assess respondents' perceptions of their performance relative to this objective measure, we should also examine the respondents' self-placement scores in Fig. 2.

Fig. 2 replicates the original plot of perceived and observed task performance from Dunning and Kruger (1999).\(^{15}\) This plot demonstrates that overall, low-performing respondents were quite optimistic in their self-perceptions. The solid line in the figure shows the performance quintile achieved by respondents having answered a given number of questions correctly. We see respondents achieve a higher performance quintile with every additional correct answer, with the exception of the very best performers (four out of five correct answers was sufficient to place in

\(^{15}\) For a tabular representation of the data analysis seen in Fig. 2, please see Table 2 in the SI for results of a linear regression model.
the top 20%). The dashed line shows the mean self-placement score for respondents at each level of quiz performance.

[Fig. 2 about here].

Fig. 2 shows us that respondents at the lowest levels of performance suffered from a high degree of over-placement, a finding which supports H1. Respondents at the very lowest performance levels ranked themselves, on average, in the fourth quintile. Those exhibiting average or near-average performance, with scores of two or three, similarly thought of themselves as having performed much better than average. Only at the highest echelons of performance does self-placement rise further, though the group of respondents scoring five out of five on the task still underestimated their performance on average.

This preliminary view of the distinction between perceived and objectively-measured performance on the task offers initial confirmation of the Dunning-Kruger phenomenon. As can be readily assumed from the 95% confidence interval estimates seen in Fig. 2, one-sample t-tests also reject the null hypothesis that poor performers’ self-placement estimates include the theoretical median of three out of five (p < 0.01 for all performance groups). Even respondents with observed scores of zero out of five rated themselves as significantly more politically knowledgeable than average---well within the fourth quintile (t = 4.64, p < 0.01). These results provide strong evidence in support of H1.16

16 Interestingly, we also see evidence of underplacement among the highest performers, an expectation of the Dunning-Kruger effect which states that these respondents will assume their exceptional knowledgeability is more common than it really is. This underplacement could stem from such individuals’ reflection upon their social networks, which are likely similarly nonmedian in task performance.
Skeptical observers of this replication might look to measurement issues to explain the reason for the overplacement pattern---indeed, the Dunning-Kruger effect has come under substantial scrutiny for these reasons in recent years (e.g., Krajc & Ortmann, 2008). Critics have suggested the potential for floor and/or ceiling effects, in which the tendency of respondents to moderate comes from the uncertainty space of the response, as well as low performers making assumptions about the distribution of "peer" responses. The most important critiques have argued that citizens exposed to Dunning-Kruger tasks will often exhibit a floor effect stemming from an assumed "backwards-J" performance curve. On very difficult tasks where the median respondent performs objectively poorly, participants might correctly infer that the vast majority of performers are unskilled, thus producing a distorted understanding of self-placement due to the task difficulty.

But as Schlösser et al. (2013) and the present study's Fig. 1 demonstrate, respondents' performance on many Dunning-Kruger tasks (including the knowledge battery) more closely approximates Normal than J-shaped curves, meaning that respondents' expectations about the distribution of responses are not likely to be a product of the difficulty of the task. Essentially, the nature of the task itself should not drive the results seen here, meaning that respondents' assumptions about the task difficulty will be a product of their (lack of) metacognition. Correspondingly, measurement issues should be less influential on the observed over-placement phenomenon than the psychological self-regard of respondents.

This first glance at the phenomenon obscures important differences between treated and control groups in Study 1, as the salience of partisanship is expected to influence the distribution of self-placement. I assess H2 below through a comparison of experimental groups.
Partisan Cueing and Overconfidence

Fig. 3, below, demonstrates the experimental effects of partisan priming on over-placement and over-estimation. Respondents who engaged in the partisan cueing task after completing the quiz had, on average, a perceived mastery score that was 0.14 points higher than those in the control group (on a five-point scale; $t = 1.91, p = 0.06$.) Correspondingly, those receiving the partisan priming task also rated their performance as 0.14 quintiles higher than the control on average ($t = 2.08, p = 0.04$). It appears that when asking respondents to reflect on the qualities and defects of partisan groups, willingness to engage in over-placement significantly and substantially increased in the qBus sample, while over-estimation increased to a similar but nonsignificant degree. These findings work to corroborate H2 when it comes to self-placement. They also provide suggestive evidence in favor of H2 from the perspective of self-assessment, though given that self-placement is by definition comparative, it seems sensible that self-placement would exhibit more consistent increases in response to the party cue than self-assessment.

While Fig. 3 provides us with a straightforward presentation of average effects across the full sample of respondents, it only lends partial insight into the phenomenon in question. To investigate further I present Fig. 4, which, much like Fig. 2, shows mean self-placement scores across levels of objective performance. Fig. 4, however, subdivides treated and control groups by observed performance quartiles. The fourth quartile comprises those who answered 4-5

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17 For tabular regression results which correspond to Fig. 3, please see SI Tables 3 and 4.

18 Quartiles are used to assess performance in order to retain sufficient subgroup sample size to permit comparisons. For regression results pertaining to Fig. 4, please see SI Table 4.
questions correctly, the third encompasses those answering 3 questions correctly, the second quartile features 2 correct answers, and the lowest performance quartile includes respondents answering 0-1 questions correctly. This subgroup analysis allows us to evaluate H3, which asserts that below-average performers will be most susceptible to the effects of party cues.

[Fig. 4 about here].

A first glance at Fig. 4 shows that the pattern of over-placement across treated and control groups varies considerably across performance groups. As performance declines, treated units' mean self-placement, denoted by the rightmost point in each panel, diverges from the self-placement of the control units, until these estimates converge again for the lowest quartile. Panels featuring hollow point estimates of perceived performance show ranges of performance for which the 95% confidence intervals overlap enough to produce nonsignificant estimates. This was true of the performers in the highest quartile, who correctly answered four to five questions correctly (t = -0.62, p = 0.53). It appears that those subjects with strong performance on the task were relatively immune to partisan cues, a finding which comports well with theoretical expectations.

Instead, it is treated units with below-average performance who are more likely than analogous units in the control condition to engage in over-placement, a finding which provides additional evidence in support of H3. Respondents in the second quartile, correctly answering two out of five questions exhibited a strong treatment effect (t = 2.48, p < 0.01). To a lesser and nonsignificant extent, treated subjects in the third quartile also witnessed an increase in self-placement relative to the control group (t = 1.64, p = 0.10). Those at the low end of the performance distribution (answering zero to one questions correctly), however, were immune to
identity cues (perhaps because they lack the minimal awareness to connect such cues to performance estimation, as discussed above; $t = 0.22, p = 0.82$). Overall, Study 1 provides evidence that below-average performers were especially susceptible to over-placement when primed using simple party cues, while other groups were less influenced by the partisan cueing task.

**Study 2: Performance Assessment in Political Context**

Thus far, results from Study 1 have revealed that low performers on a knowledge battery react to simple party cues by increasing their self-placement. In the following sections, I examine partisan *source cues* as a second type of cue which works to condition the Dunning-Kruger Effect. Specifically, Study 2 provides evidence that among those with moderately-low performance on political knowledge tasks, peer assessments are also strongly influenced by partisan identities. However, these effects are not consistent across Republican and Democratic groups, a surprising finding which is deserving of further discussion.

In Study 2, MTurk respondents completed the knowledge battery and assessed their own performance. These self-placement and self-assessment scores deviate from respondents' objective performance in a pattern analogous to the findings presented above. Fig. 5 shows this pattern.

[Fig. 5 about here].
In Fig. 5, those with quiz scores of 0, 1, and 2 substantially overestimate their performance by more than a full quintile. However, while this pattern of overplacement among low-performers replicates in the MTurk sample, we observe a curious depression in self-placement across almost all respondents relative to the qBus sample. No group is willing to rate themselves higher than around the 4th quartile on average, while most respondents rate themselves near or below the median. It is unclear why MTurk respondents would be so much less confident in their responses relative to the qBus sample, though it may be that MTurk users expected many of their peers to cheat or to possess high levels of competence. We also know that MTurk respondents are highly concerned about payment due to the prevalence of attention checks in academic MTurk studies, possibly prompting these subjects to engage in more honest self-appraisals (Berinsky, Margolis, & Sances, 2014; Hauser & Schwarz, 2016). Regardless, the findings presented in Fig. 1 show that low performers do not understand the extent of their lack of competence even when accounting for this "negative intercept shift". Once again we see evidence of the Dunning-Kruger effect.

Study 2 goes further to assess peer performance evaluations. After completion of the knowledge task, respondents were asked to evaluate the political knowledge of a (high-performing) fictional Republican or Democrat. Expectations related to H4 are assessed by Fig. 6 below. This graphic shows the average rating of a (fictional) peer's performance on the same five-item knowledge battery implemented in Study 1. Fig. 6, much like Fig. 4 above, is faceted into four panels for ease of interpretation, depicting the relationships under consideration across objective

19 For regression results pertaining to Fig. 5, see SI Table 8.

20 For regression results pertaining to Fig. 6, see SI Table 9.
performance quartiles. Each facet contains four estimates with 95% confidence intervals: Democrats' assessments of Democratic and Republican peers' performance (the far left and center-left bars within each panel, respectively), and Republicans' assessments of Democratic and Republican peers' performance (the far-right and center-right bars). Point estimates of peer evaluations are represented by D's (the mean evaluation of a Democratic peer) and R's (showing the mean evaluation of a Republican peer). In this way, Fig. 6 visualizes a three-way interaction between respondent's party, peer's party, and objective task performance.

[Fig. 6 about here].

The rightmost panel of Fig. 6 shows that irrespective of respondent or peer partisanship, respondents with the highest levels of political knowledge were able to correctly identify that the peer was high-performing (in all conditions, the fictional peer "answered" all five questions correctly). No cross-party or treatment contrasts approach conventional levels of significance when examining the peer ratings of high-achieving respondents---a null finding which is expected given H4. This is consistent with the expectation that high performers will possess a good understanding of objective peer performance thanks to their own performance. However, looking across the point estimates towards the leftmost facets of the figure, we see initial evidence that respondents at lower levels of objective performance struggle to identify the fictional peer as excellent. The mean peer assessment among Quartile 2 and Quartile 3 respondents is around 0.63 points lower than that of above-average respondents (t = 15.65; p < 0.01), reflecting the expectation that these respondents are generally less capable of extracting an accurate performance signal from the peer's objective performance. Further, respondents in

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21 The modal response among the MTurk sample was identical to that of the qBus sample: three answers correct out of five.
Quartile 1 exhibited very high variance in their responses, despite mean evaluations which were lower on average than other groups.

But in addition to these overall decreases in peer ratings as knowledge decreases, Fig. 6 allows us to evaluate the extent of directional motivated reasoning in peer evaluations through an assessment of treatment effects. Within the Q3 performance group, Democrats ($t = 0.42, p = 0.68$) and Republicans ($t = -0.30, p = 0.76$) show little evidence of a reliance upon party cues to assess the political knowledge of a peer as the peer's partisanship varies. This is especially interesting given that these groups are generally much worse than the high performers at recognizing the peer's excellence, as seen above. High performers in Q4 are similarly unaffected by the treatment, consistent with Hypothesis 4 (Republicans: $t = 0.61, p = 0.54$; Democrats: $t = 0.04, p = 0.97$). And again consistent with H4, very low performers in Q1 also exhibit high variance and little evidence of a treatment effect (Republicans: $t = -0.07, p = 0.95$; Democrats: $t = -0.49, p = 0.63$).

However, this pattern contrasts with that of moderately low-performing partisans, for whom the expected treatment effects are most evident. In terms of cross-party differences in reaction to the fictional peer, we see evidence that moderately low-performing Democrats rated the Republican peer as substantially less knowledgeable than did moderately low-performing Republicans ($t = -2.20, p = 0.03$). Analogously, this group of Democrats saw their in-group peer, the fictional Democrat, as more knowledgeable than did Republicans ($t = 2.98, p < 0.01$). But when assessing within-party treatment effects, variation in the treatment condition yielded a much larger contrast in performance evaluations among Republican respondents compared to Democratic respondents. Low-performing Democrats rated the Democratic peer as roughly 0.22 points better than the Republican peer on average (on a five point scale; $t = 1.53, p = 0.13$). This finding is in
the expected direction, though it does not approach conventional levels of statistical significance. The weak pattern for Democrats stands in contrast to the striking treatment contrast exhibited by moderately low-performing Republicans, who rated the Democratic peer as roughly -0.60 points worse than the Republican peer on average (t = -3.52, p < 0.01).

We can attend to this surprising asymmetry with a host of speculative explanations. We could cautiously separate these explanations into two categories: measurement issues and asymmetries in the ways in which partisans engage with the world around them. The first set of explanations largely stem from the existing literature on MTurk samples---especially studies which have suggested that Republican MTurk users are unlikely to resemble the average Republican (e.g., Huff & Tingley, 2015). While recent findings have shown that MTurk samples tend to skew liberal in general (e.g., Levay et al., 2016), it is also possible that Republican self-identifiers on MTurk batteries will be differently susceptible to directional cues for less well-known reasons. The second rationale for this phenomenon, the existence of meaningful partisan asymmetries, I take up in the discussion below.

Conclusions

More than half a century after Downs (1957) asserted a theory of rational ignorance in American democracy, evidence continues to mount that most citizens know little about the institutions, actors, and processes of American government (e.g., Delli Carpini & Keeter, 1997). Among those lacking in, but not entirely devoid of political knowledge, the present findings speak to an ignorance of ignorance---Kruger and Dunning's (1999) "double burden of incompetence"---which also allows for partisanship to exacerbate political overconfidence. This result is normatively worrying from the perspective of citizens' ability to self-correct, as it may be that
rationally ignorant Americans are especially confident that they are better informed than many of their (partisan) peers. The rationally ignorant fail to overcome their ignorance not just because they face steep costs and lack incentives to improve, but because they are unaware that they are relatively ignorant. They become increasingly hardened to the possibility that they are uninformed when partisan identities are activated, a commonplace feature of most contemporary political discussion. Social norms of civic engagement and participation (which are prevalent even among the moderately unsophisticated) are unlikely to turn these citizens away from rational ignorance, because they are likely satisfied by the assumption that their knowledge outpaces their peers.

We do, however, see evidence that among even the modestly knowledgeable, party cues do less to exacerbate over-placement on political knowledge tasks. The directional goals of motivated reasoning may still be strong among partisans in this group, especially because pre-treatment effects are notoriously difficult to evaluate (e.g., Druckman & Leeper, 2012). But these citizens can also pursue accuracy motivations thanks to their ability to better estimate the true distribution of responses in the population. This finding assuages concerns that partisans' overconfidence will harm the quality of political discussion and information acquisition, as politically knowledgeable individuals will be the most likely to engage in such behavior in the first place (e.g., David, 2009). But much like the phenomenon of selective exposure to political content (e.g., Prior, 2007), the notion that the well-educated are accurate judges of political competence does little to assuage our concerns about those for whom political knowledge is more substantially lacking.

We also see evidence in Study 2 that Republicans use partisan cues to judge peers' political knowledge to a greater extent than do Democrats. Such a thesis speaks to the burgeoning literature on 'asymmetric polarization', which finds that Republicans have become more
committed ideologues than Democrats in recent years (Grossmann & Hopkins, 2016). But more broadly, the findings resonate with recent studies on the nature of `factual polarization' in the American electorate (e.g., Bisgaard, 2015; Jerit & Barabas, 2012; Parker-Stephen, 2013). Americans are increasingly likely to report starkly different sets of factual beliefs about political actors and current conditions as a function of their partisanship. Online discussion is rife with unsubstantiated rumors, which propagate through polarized political discussion networks. While the extent of these phenomena and their effects are the subjects of active scholarly debate (e.g., Berinsky, 2017), the present findings speak to one potential pathway through which relatively uninformed partisans might come to reinforce their nonmedian factual beliefs. Echo chambers can grow more cloistered when political overconfidence and party cues interact to negatively influence citizens' reliance on the political knowledgeability of their peers. While we might otherwise expect that interaction with knowledgeable peers would cause self-correction among the moderately uninformed, the strong influence of selective media exposure could be unchecked by this form of discourse. Rumors, misinformation, viral stories, and partisan framing would be left immune to serious metacognitive reflection. As Kruger & Dunning (1999) and others have shown, the "double burden" of incompetence is paradoxical because it is self-reinforcing---a notion that resonates with current work on political polarization.

These studies possess several inherent methodological limitations and shortcomings, which caution against an uncritical interpretation of the present analyses. While a power analysis (see the SI) demonstrates that the sample sizes in both studies are appropriate, analyses which necessitate scrutiny of partisan and performance subgroups are occasionally close to being underpowered. We might also inevitably question the design of the knowledge battery, despite evidence (in the SI) that task performance strongly correlates with known predictors of political
knowledge like education. And one might wonder about the experience of respondents reflecting upon the task in an online survey-experimental setting—especially the possibility that some of the respondents cheated on the task despite being told not to. These concerns more broadly relate to critiques of the external validity of online survey experiments, which likely apply to the present study. While it is hard to imagine a research design which could evaluate the Dunning-Kruger Effect without subjecting respondents to a highly artificial knowledge assessment, we must acknowledge that it requires some imagination to connect these effects to the respondent's real-world political environment.

Nevertheless, the present findings foreshadow several downstream consequences of the Dunning-Kruger effect for theories of political participation, partisan motivated reasoning, and political discussion. Future research is poised to further explore how political overconfidence influences political engagement, ideological commitment, and extremism, especially when citizens communicate with homogeneous and diverse social networks. It is likely that those with low political knowledge will overestimate their performance relative to their (rare) discussion partners, especially when those partners identify with the out-party. And following the example of Ortoleva & Snowberg (2015a), pressing questions emerge regarding the degree to which overplacement in political knowledge might lead to the adoption of more extreme ideological positions, as well as more unshakeable partisan identities. However, much work remains to further theorize and empirically investigate these important patterns.

**Bibliography**


Fig. 1: Distribution of Correct Knowledge Battery Responses, 2017 qBus Sample
Fig. 2: Observed vs. Perceived Performance Quintile, 2017 qBus Sample

Note: For this graphic and all subsequent graphics, vertical lines denote 95% Confidence Intervals.
Fig. 3: Comparison of Treated and Control Self-Placement Across Quiz Score, 2017 qBus Sample
Fig. 4: Comparison of Treated and Control Self-Placement Across Quiz Score, 2017 qBus Sample

![Graph showing comparison of treated and control self-placement across quiz score](image)

- **Quartile 1**: Control, Treated
- **Quartile 2**: Control, Treated
- **Quartile 3**: Control, Treated
- **Quartile 4**: Control, Treated

Legend:
- ○ Nonsignificant
- ● p < 0.05
Fig. 5: Observed vs. Perceived Performance Quintile, 2017 qBus Sample
Fig. 6: Perceptions of Peer Performance Across Party and Treatment, 2017 MTurk Sample.