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Partisan Disparities in the Use of Science in Policy

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DRAFT

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Abstract

Science, long considered a cornerstone in shaping policy decisions, is increasingly vital in addressing contemporary societal challenges. However, it remains unclear whether science is used differently by policymakers with different partisan commitments. Here Furnas, LaPira, and Wang combine large-scale datasets capturing science, policy, and their interactions, to systematically examine the partisan differences in the use of science in policy across both the federal government and ideological think tanks in the United States. They find that the use of science in policy documents has featured a roughly six-fold increase over the last 25 years, highlighting science's growing relevance in policymaking. However, the pronounced increase masks stark and systematic partisan differences in the amount, content, and character of science used in policy. Democratic-controlled congressional committees and left-leaning think tanks cite substantially more science, and more impactful science, compared to their Republican and right-leaning counterparts. Moreover, the two factions cite substantively different science, with only about 5% of scientific papers being cited by both parties, highlighting a strikingly low degree of bipartisan engagement with scientific literature. The researchers find that the uncovered large partisan disparities are rather universal across time, scientific fields, policy institutions, and issue areas, and are not simply driven by differing policy agendas. Probing potential mechanisms, they field an original survey of over 3,000 political elites and policymakers, finding substantial partisan differences in trust toward scientists and scientific institutions, potentially contributing to the observed disparities in science use. Overall, amidst rising political polarization and science's increasingly critical role in informing policy, this paper uncovers systematic partisan disparities in the use and trust of science, which may have wide-ranging implications for science and society at large.

Science has long been regarded as essential to policymaking, providing evidence and knowledge that inform decisions [1–8] with its unique epistemic authority [9,10]. Its role has become especially vital, as many pressing societal challenges today—from climate change to public health crises to technological advancement—are intricately linked with scientific progress [11–16]. However, amidst rising political polarization [17–21], a fundamental question remains open: Is science used differently by policymakers with different partisan commitments? Understanding any potential partisan disparities in the application of science to policymaking is crucial not only to promote evidence-based decision-making [4,22–26], but also to uphold public trust in science [27–34], enhance policy implementation [35,36], and foster bipartisan cooperation [37,38].

Here we combine two large-scale databases capturing policy, science, and their interactions to examine the partisan differences in citing science in policymaking in the United States. Our first dataset comes from Overton [39] and tracks 641,894 policy documents published by both the federal government and think tanks in the United States from 1995 to 2021, as well as the scientific papers and other policy documents referenced therein (see supplementary materials section 1.1). There has been longstanding interest in quantifying the use of science in policy [40–47], and recent work suggests that Overton currently offers the most comprehensive tracking of policy documents and their citations to scientific papers [5,7,8,48]. Here we focus on the complete set of all congressional committee reports since 1995 and committee hearings since 2001 (n=49,345), as well as 191,118 policy documents published by 121 US-based ideological think tanks after 1999 (see supplementary materials section 4). We further match the scientific references (n= 424,199) in these policy documents to our second dataset, Dimensions [49], a large-scale publication and citation database that captures 122 million scientific publications across all disciplines. Linking these two databases offers us a unique opportunity to examine the partisan differences in the use of science in policy.

Figure 1A plots the fraction of policy documents that include at least one scientific reference in our data corpus. We find that the use of science in policymaking has featured a roughly six-fold increase over the 25-year period, growing from 5 percent in 1995 to nearly 30 percent in 2020. Subsetting by type of policy-producing organization, we find similar growth patterns among government policy documents (Fig. 1B) and think tank documents (Fig. 1C). Overall, Fig. 1 documents a rapid and substantial rise in the prevalence of citing science in policy documents, suggesting the growing relevance of science across a broad range of policy institutions in the United States. Yet, as we show next, behind this impressive growth lies systematic partisan differences in the use of science in policy.

To understand partisan differences in the propensity to cite science, we first focus on policy documents produced by congressional committees, with granular measures of political control at the committee level (see supplementary materials section 1.1, Fig. S1). Committees are the institutional workhorses of information gathering in Congress (*1*, *39*). Calculating the probability of a committee policy document citing science for Democratic- and Republican-controlled committees separately, we find that while policy documents from both types of committees see an increased use of science over time, the growth patterns differ substantially by the party in control of the committees (Fig. 2A,B). Indeed, policy documents from Democratic-controlled committees are nearly 1.8 times more likely to cite science than those from Republican-controlled committees (Fig. 2C) (see supplementary materials section 7). When we estimate this

effect at the committee level using changes in party control as a sharp difference-in-difference design with 80 groups (committees) and 13 periods (Congresses), we find that committees that undergo a change from Republican to Democratic party control see an average increase of 188 additional citations to science in the congressional term after the switch. We find no equivalent effects in placebo tests of the two preceding Congresses or the Congress after a party switch occurs (see supplementary materials section 9). Overall, these results show that within the US Congress, Democratic-controlled committees consistently cite science more than Republican-controlled committees, demonstrating a greater reliance on scientific evidence.

Shifting from the public to the private sector, we test the partisan differences in the use of science in ideological think tanks. While think tanks operate outside of government, many align with the ideological positions of the two major parties [21,50], allowing us to differentiate think tanks by their ideological alignment (see supplementary materials section 4 for details of our coding procedure). Ideological think tanks serve as service bureaus for partisan policymakers in extended party networks [51], providing legislative subsidies [52,53], setting agendas [54], and incubating policy alternatives [55]. They are staffed by party operatives and researchers who frequently move back and forth between government, party, and campaign organizations [56]. Figure 2F plots the propensity of citing science over time for policy documents produced by ideological think tanks, showing a large and persistent difference between left-leaning and right-leaning think tanks. Given that think tanks' ideological alignments are generally static, we address time-invariant unobserved heterogeneity at the unit level using think tank random effects. Figure 2G shows the predicted probability of a think tank policy document citing science for left- and right-leaning think tanks separately, estimated by logistic regression with think tank random effects and a linear time trend. Overall, policy documents from left-leaning think tanks are more than five times more likely to cite science than those produced by right-leaning think tanks (Fig. 2H), revealing an even starker partisan difference in the propensity to cite science among ideological think tanks than in the government.

Moreover, this observed tendency of Democrats and left-of-center think tanks to cite science more frequently than their Republican and right-of-center counterparts appears widespread across fields and policy issues. We re-estimate fixed effects committee models separately for each scientific field and on issue-specific subsets of policy documents. We find that Democrats cite science distinguishably more than Republicans across 20 of the 23 scientific fields (Fig. 2D) and 15 of the 17 issue areas (Fig. 2E). Estimating the random effects regressions on think tank citations across scientific fields and issue areas, we find that left-of-center think tanks universally cite science more than right-of-center think tanks across all 23 scientific fields (Fig. 2I) and 17 issue areas (Fig. 2J) we study.

Overall, Fig. 2 documents systematic partisan differences in the amount of science used in policymaking, raising an important next question: Do Democratic- and Republican-leaning policymakers draw from the same science? To answer this question, we first assess the degree of overlap in the science cited, asking out of all the science cited in policy documents, what fraction was cited by both parties. We find that, strikingly, only 5.5 percent of papers cited by congressional committees are cited under both Democratic and Republican control, documenting a low degree of overlap in the set of bipartisan-cited papers (Fig. 3A). Repeating the same analyses for ideological think tanks, we find the same patterns: only 5.2% of science is cited by

both left- and right-of-center think tanks (Fig. 3C). To understand if the paucity of bipartisan-cited science is a more recent phenomena, corresponding to the rising political polarization in recent years [17,20,57], we examine the temporal changes, finding that the degree of overlap has stayed rather stable over time (Fig. 3B,D). In other words, the prevalence of the partisan use of science is a longstanding but previously unknown feature of the US policy landscape. We further find that, for both the US Congress and think tanks, this low degree of overlap is remarkably universal across scientific fields and policy issues (see supplementary materials section 10, Figs. S6, S7). Note that on a year-by-year basis, the fraction of bipartisan-cited science hovers around 12%-15% for both the government and ideological think tanks (Fig. 3B,D), which is higher than the overall average of 5% (Fig. 3A,C). This is because the bipartisan-cited science tends to be cited repeatedly, forming a stable core of science that policy documents consistently draw from. Moreover, the low degree of overlap we find in cited science is not driven by the fact that all science that is cited only once is, by definition, "partisan-cited." Indeed, we find that even among the papers cited two or more times, the fraction of papers that receive bipartisan citations is substantially lower than expected, for both Congress and think tanks (see supplementary materials section 10, Fig. S8). Overall, amidst numerous variations of our measurements, we observe a consistent picture: The vast majority of science cited in policymaking is used in a partisan rather than bipartisan manner.

The fact that Democrat and Republican policymakers rarely draw on the same scientific papers raises the question of whether they at least use substantively similar papers to inform their policy, prompting us to next assess the topical differences between the science they use. Here we use deep learning methods to represent scientific papers in a high-dimensional space. Specifically, we use SPECTER embeddings to represent each scientific article as a vector in a 768-dimensional space [58], allowing us to quantify the topic similarity between cited science.

Take, for example, the House Energy and Commerce Committee. We analyze the scientific papers cited by the committee reports in our embedding space and apply a clustering algorithm to group them into clusters (see supplementary materials section 5). Figure 3E,G show two-dimensional t-SNE visualizations of these clusters [59] of science cited by the committee under Democrat and Republican control, respectively. We find that while there are some common areas of focus, the two plots show many distinctive clusters of science drawn by the committee, depending on who is in control. Indeed, under Democratic control, the committee was much more likely to cite science on abortion, obstetrics, smoking, energy production and infrastructure, or violence, guns, and mental health (Fig. 3E). Under Republican control, by contrast, the committee was much more likely to cite science about healthcare insurance, costs and outcomes, air pollution, or opioids, among other topics (Fig. 3G). These partisan differences are further reflected in the histogram of topic clusters (Fig. 3F). We find similar patterns for think tank policy documents. Take the policy issue around weather as an example (Fig. 3H,I). Left-of-center think tanks tend to rely on science around the topics of the economic costs of climate change, climate resilience and adaption, mental health and disaster, and air pollution and temperature (Fig. 3H), while right-of-center think tanks are much more likely to cite science about the effects of elevated CO_2 on plants, ocean acidification, prior ice ages, and Holocene climate patterns (Fig. 3J). The histogram of topic clusters again vividly illustrates the partisan differences (Fig. 3I). Finally, we systematically evaluate the similarity between science cited by left-of-center and right-of-center factions using two different measures. First, we compare the

cluster distributions and find that across the vast majority of congressional committees (Fig. 3K) and all issue areas for ideological think tanks (Fig. 3L), the data consistently reject the hypothesis that partisan factions draw from the same distribution of scientific topics. We further quantify the similarity between the set of papers cited by each faction using the Cramer statistic [60], designed for high-dimensional two-sample tests. We compute this statistic for each committee (Fig. 3M) and issue area (Fig. 3N), finding that the partisan differences are statistically distinguishable ($p<.05$) in all but two cases, the Senate Budget Committee, which has the highest proportion of bipartisan-cited science, and the House Rules Committee (where partisan differences are distinguishable at $p<.1$).

Taken together, these results demonstrate that despite science's unique epistemic authority in providing a common knowledge base and a shared understanding of critical issues facing society, there appears to be a strikingly low degree of overlap in the scientific knowledge drawn by the left-leaning and right-leaning policy professionals across the US Congress and ideological think tanks. The large disparity uncovered in this paper is rather universal across time, policy institutions, and issue areas. One potential explanation for these strong and persistent partisan differences is that they may simply reflect the different policy focus and priorities between the two parties. To test if this explanation is sufficient, we perform a matching exercise by applying a text embedding method to policy documents [61] to identify the most similar co-partisan and out-partisan policy documents for each policy document in our corpus. We find that conditional on content, policy documents written by the left consistently tend to cite more science than those produced by the right (see supplementary materials section 11.2, Table S20). And comparing the similarity of science cited therein, we find that co-partisan-produced policy documents systematically cite more similar science than out-partisan-produced documents (see supplementary materials section 11.1, Figs. S9-S12). In other words, even for extremely similar policy documents, the science they cite predictably differs in both the amount and topic areas, depending on partisan or ideological commitment.

These results demonstrate that the left and right policymakers draw on science at different rates, and they rely on different science, even conditioning on policy focus. These discrepancies prompt us to ask which faction uses science that is more aligned with the work that scientists themselves value. To answer this question, we compare the characteristics of the scientific papers cited by left-leaning and right-leaning policymakers, measuring their scientific impact in science, recency, and whether they have passed peer review. We find that, compared to Republican committees, Democratic committees are more likely to cite hit papers in science, defined as the top 5% most cited papers in their field and year (Fig. 3O). We see much greater differences for think tanks, with left-of-center think tanks more likely than right-of-center think tanks to cite hit papers in science (Fig. 3S), papers with a higher field citation ratio (Fig. 3T), more recent papers (Fig. 3V), and papers that have passed peer review (Fig. 3U). In other words, Democratic and left-of-center organizations tend to cite science that is more in line with the work that scientists themselves consider important.

Overall, we observe stark and systematic differences in the amount, content, and character of science cited in policy by partisan factions in the United States. These differences are not explained by temporal trends, heterogeneities across field, issue, or policy content. Rather, they are remarkably persistent across fields of research, policy issues, time, and institutional context.

What else might explain the observed partisan differences in the use of science? Of the myriad factors that may influence the use of science in policymaking [4], trust is often understood to be a key mediator governing the use of information [62–65], raising the question of whether differential levels of trust in scientists and scientific institutions may play a role.

While there is scarce empirical evidence assessing the level of trust in science among policymakers or political elites, our hypothesis here is partly motivated by the marked decline in conservatives' trust in science in recent decades among the general public [29,32,33], which suggests that the rising political polarization during this period in the United States may be threatening confidence in science [37]. Here we fill this gap to directly assess partisan differences in trust in science among policymakers by fielding a novel survey of roughly 3,500 US political elites and public servants—the types of professionals who are actively involved in setting policy agendas and drafting policy documents—allowing us to quantitatively probe their attitudes toward science (see supplementary materials section 2.1). For comparison, we also conducted a contemporaneous survey of roughly 1,000 likely voters (see supplementary materials section 2.2). We used a standard party identification battery, as well as a series of questions about trust in scientists [28] and scientific organizations.

We first asked political elites to rate how much they "trust or distrust scientists" along four different dimensions, uncovering three primary findings (Fig. 4A). First, regardless of party identification, political elites exhibit substantially higher levels of trust in scientists than co-partisan likely voters, suggesting that political elite attitudes toward science cannot merely be assumed to match those in the general public [28–30]. Second, Democratic elites trust scientists substantially more than their Republican counterparts ($\mu_D = 1.42$ vs $\mu_R = 0.65$, $t = 25.86$, df = 1188.50, $p < 0.001$), showing large, systematic partisan differences in attitudes toward scientists. For example, 96.0% of Democratic elites either completely or partially trust scientists to "create knowledge that is unbiased and accurate" compared to only 63.7% of Republican elites. The partisan differences are especially stark among those with the highest level of trust. Of Democratic elites, 44.1% completely trust scientists to create unbiased and accurate knowledge, compared to only 9.9% of Republican elites. Third, despite the differences between the four dimensions we surveyed, ranging from the knowledge scientists create to their roles in informing the public and government officials, the partisan differences we uncover are remarkably consistent across all four dimensions.

To assess the level of trust in scientific institutions, we asked political elites to rate the trustworthiness of the National Academies of Sciences, Engineering, and Medicine (NAS) and the American Association for the Advancement of Science (AAAS)—two of the most prominent scientific organizations in the world—on matters of public policy (Fig. 4B). Nearly three times as many Democratic elites (61.2%) rate NAS as "very trustworthy" as Republican elites (22.8%) ($\chi^2 = 427.43$, df = 8.00, $p < 0.0001$). The difference is even more pronounced for the AAAS, which Democratic elites trust five times more than Republican elites (40.7% vs. 8.2%, $\chi^2 = 444.43$, df = 8.00, $p < 0.0001$). These partisan differences are robust after controlling for a range of attributes such as belief in conspiracies, racial resentment, hostile sexism, and others (see supplementary materials section 12). Overall, these findings support the proposition that the differential attitudes toward science may partly explain the observed partisan differences in the use of science in policy.

Discussion

Taken together, our results demonstrate that across the government and think tanks, policy documents exhibit a marked shift toward incorporating scientific evidence, featuring a notable six-fold increase in the use of science over the past 25 years. This increasing reliance on science is encouraging, especially given that many societal challenges today, from climate change to technological advancement, are deeply intertwined with scientific development. Yet at the same time, this paper uncovers systematic partisan differences in the use and trust of science, which may have wide-ranging implications for science and society at large.

Indeed, science is often seen as a neutral, objective source of information, providing evidence-based insights irrespective of political or personal beliefs [4,66]. If different political parties use different scientific sources to back their claims, it raises the question of whether science is being used selectively to support pre-existing beliefs or agendas [67,68]. This line of thinking can erode public confidence in both science and government and undermine the foundational principles of scientific inquiry and its role in informing public policy and personal choices. Above all, our findings underscore the threat to the perception of science as an objective, trusted source of information.

Further, the strikingly little overlap in the science cited by policymakers across the two sides of the aisle raises concerns of whether our policies are always drawing on the best available evidence. A failure to engage the right science in policymaking could result in policies that fall short of their intended objectives or, worse, precipitate unintended adverse outcomes. The systematic disparity in the quality and quantity of science used by different parties, then, raises concerns about the efficacy of the policies and their ability to serve shared societal goals.

More broadly, in a robust democratic society, while partisans might diverge on their priorities, values, and normative judgments, their capacity for effective cooperation—and the integrity of our democratic institutions—is premised on maintaining a broadly shared set of facts. The pronounced partisan differences in the use and trust of science among policymakers suggest a potential erosion of this shared factual foundation, thereby undermining bipartisan efforts toward constructive solutions. For example, the contrasting policy responses by Republican and Democratic policymakers to coronavirus mitigation strategies, ranging from vaccine mandates to off-label treatments, serve as trenchant demonstrations of this dynamic (*68, 69*, *70*). Amid rising political polarization, the intertwining of science and partisan politics may therefore impede constructive dialogue, hinder bipartisan cooperation, and stymie our collective ability to address many pressing societal challenges.

Ultimately, science is a crucial public good and depends on both sustained public support and long-term commitments [11,70]. In contrast, the American political landscape is characterized by its inherent volatility, marked by periodic shifts in political control (*62*). Such volatility presents a stark juxtaposition against the backdrop of science's need for stability, especially given that the US government is the single largest funder for basic science [71]. Despite recent instances of bipartisan support for science, the uncovered partisan differences in the use and trust of science highlight a profound tension at the nexus of science and politics. The results presented in this

paper further suggest there are many fruitful areas of future research at this science-politics interface. For example, in this paper we examined partisan use of science by considering one set of specific, public, and traceable instances of the use of science: citations in policy documents. While the very public nature of these citations in persuasive documents suggests that they may be suited to capture policymakers' revealed preferences regarding whether science is beneficial to their policy arguments [72,73], future work may attempt to further unpack the purpose of those citations, which would help us discern between "substantive" and "strategic" uses of science, or explore the broader "conceptual use" of science in shaping policymakers' perspectives. Moreover, while our focus has been predominantly on the US, the challenges highlighted here—pertaining to evidence-based policymaking, political cooperation, and public trust and support of science—transcend national boundaries. Indeed, all governments need accurate information to govern effectively, underscoring the need to broaden the geographical ambit of such studies. Lastly, while this paper focuses on the partisan use of science, it also uncovers an important—albeit small—set of papers that consistently see bipartisan use. A better understanding of this core of bipartisan-cited science could further demonstrate the value of science across the political spectrum and reveal new avenues for fostering mutual understanding in a polarized political climate.

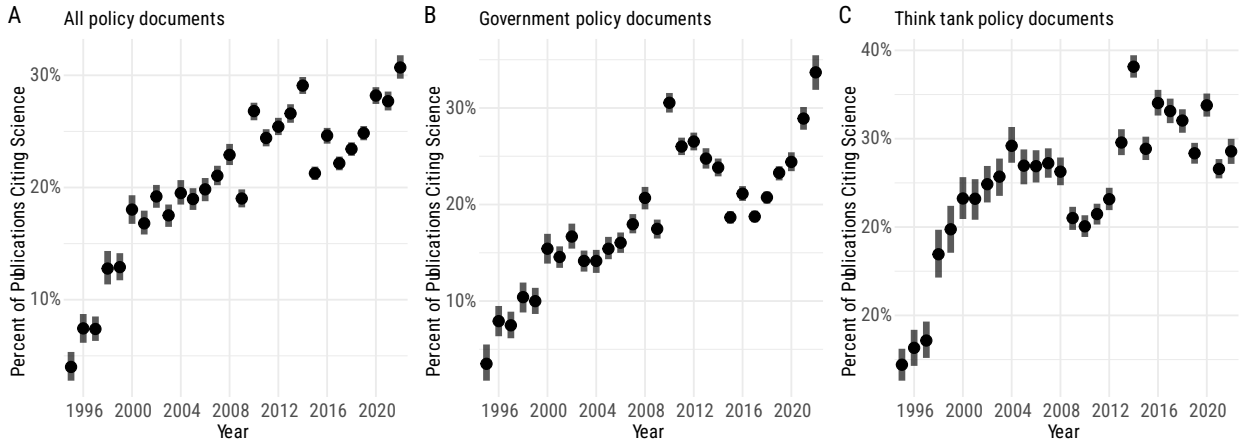


Figure 1. The increasing use of science in policy documents over the last 25 years. (**A**) shows the share of US policy documents citing science at least once has grown from about 5 percent to 30 percent. (**B, C**) show a similar increase for policy documents produced by the federal government (**B**) and think tanks (**C**). Error bars indicate 95% bootstrapped confidence intervals (CIs). To ensure a comparable set of comparisons over time, we limit these analyses to all organizations that were in the dataset starting in 1998 or earlier. In SM S6, we estimate the probability that policy documents will cite science across all organizations in the dataset, controlling for compositional effects, and we arrive at the same conclusions.

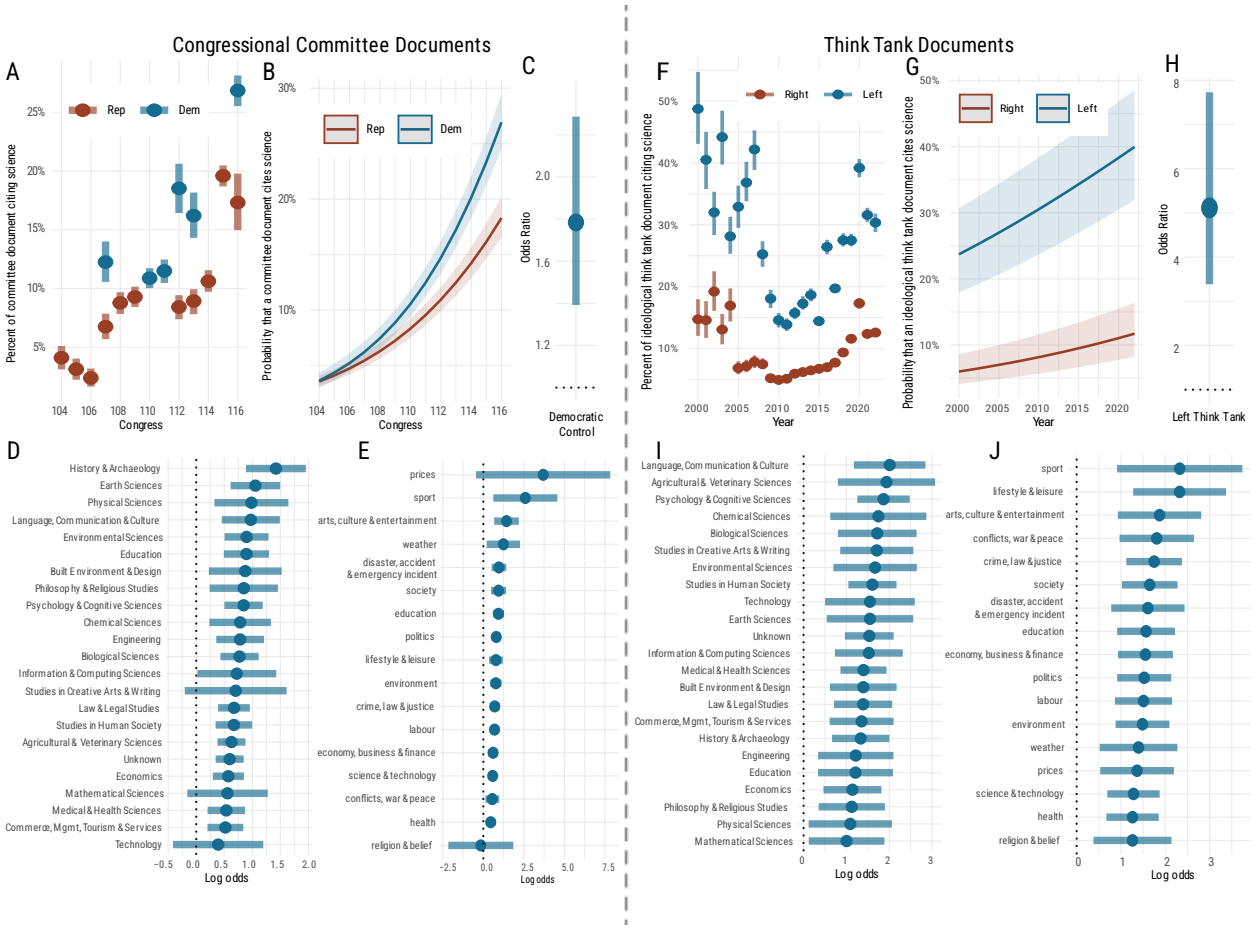
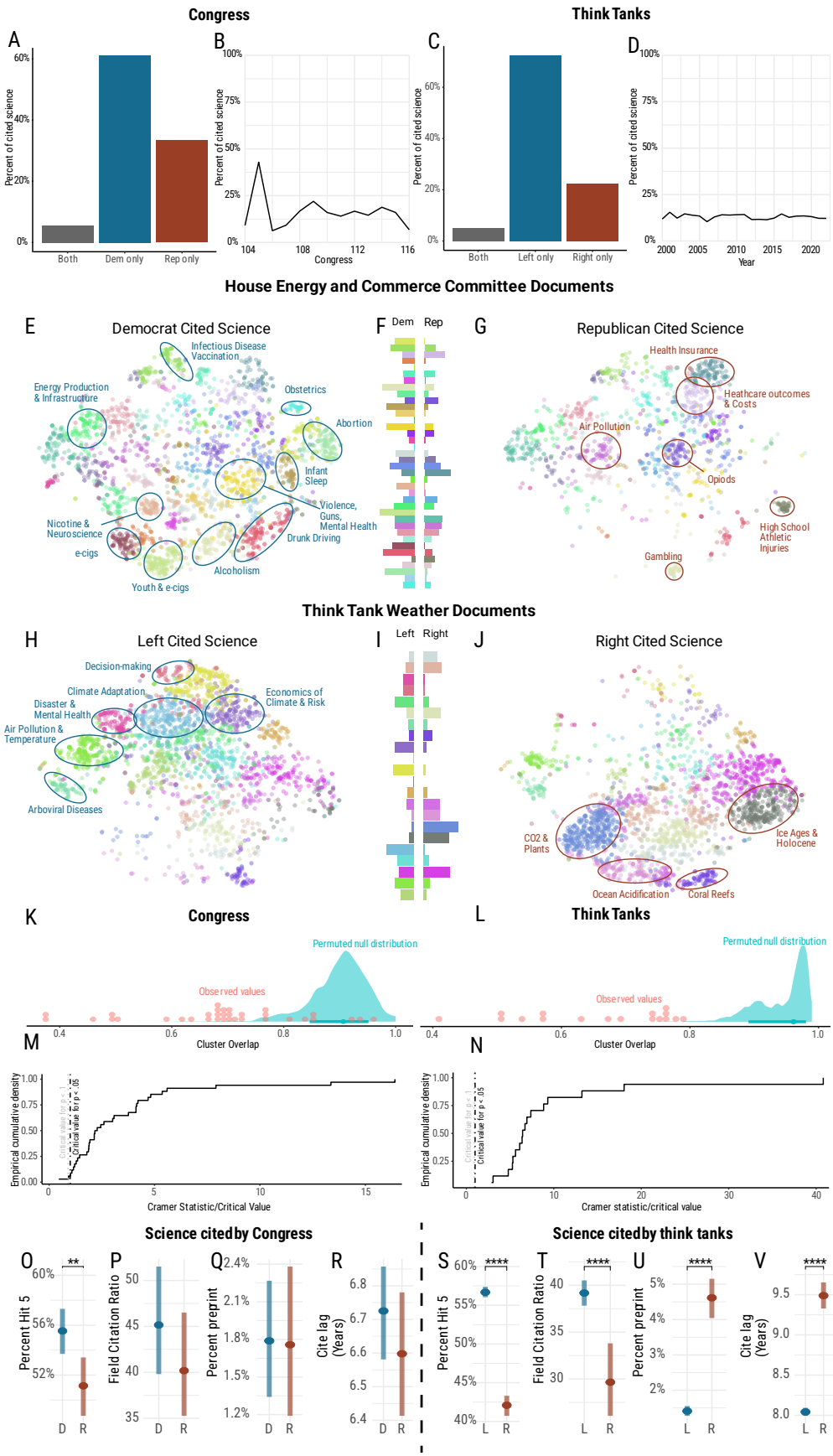


Figure 2. Partisan disparities in the amount of science used in policy. (**A**) The percentage of policy documents produced by congressional committees that cite science at least once over time, with Democratic-controlled committees in blue and Republican-controlled committees in red. Error bars indicate 95% CIs. (**B**) The predicted probability of a committee policy document citing science by party control from a logistic regression with committee fixed effects and a linear time trend. The committee fixed effects control for time-invariant committee-level differences in the propensity to cite science to estimate within-committee effects. (**C**) On aggregate, a document from a Democratic-controlled committee is nearly 1.8 times more likely to cite science than a document from a Republican committee, estimated using a logistic regression with two-way fixed effects for committee and Congress. (**D**) presents the same estimand reported in (C) re-estimated separately on only citations to specific fields of research. (**E**) presents the same estimand reported in (C) re-estimated separately on only citations to committee documents tagged with a specific issue. The tendency for Democratic-controlled committees to cite science is common across fields and issues. (**F**) The percentage of policy documents produced by ideological think tanks that cite science at least once by year, with left-of-center think tanks in blue and right-of-center think tanks in red. Error bars indicate 95% CIs. (**G**) The predicted probability of a think tank policy document citing science by ideology from a logistic regression with think tank random effects to control for time-invariant unobserved heterogeneity at the unit level and a linear time trend. (**H**) On aggregate, a policy document from a left-of-center think tank is more than 5 times more likely to cite science than a document from a right-of-center think tank, estimated using a logistic regression with two-way random effects for think tank and year. (**I**) presents results from a series of regression models estimated separately on citations to specific fields of research, with year fixed effects. (**J**) presents results from a series of regression models estimated separately on citations to documents tagged with a specific issue, with year fixed effects. The tendency for left-of-center think tanks to cite science is common across fields and issues. See SM S7 for full model details.


Congress
Think Tanks
A
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Percent of cited science
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Left only
Right only
Year
House Energy and Commerce Committee Documents
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Infectious Disease Vaccination
Energy Production & Infrastructure
Obstetrics
Abortion
Infant Sleep
Violence, Guns, Mental Health
Drunk Driving
Nicotine & Neuroscience
e-cigs
Alcoholism
Youth & e-cigs
F
Dem
Rep
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Republican Cited Science
Health Insurance
Heathcare outcomes & Costs
Air Pollution
Opiods
High School Athletic Injuries
Gambling
Think Tank Weather Documents
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Decision-making
Climate Adaptation
Economics of Climate & Risk
Disaster & Mental Health
Air Pollution & Temperature
Arboviral Diseases
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CO2 & Plants
Ice Ages & Holocene
Ocean Acidification
Coral Reefs
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Congress
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Think Tanks
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Observed values
Cluster Overlap
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Empirical cumulative density
Critical value for p < .05
Cramer Statistic/Critical Value
Cramer statistic/critical value
Science cited by Congress
Science cited by think tanks
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V
Percent Hit 5
Field Citation Ratio
Percent preprint
Cite lag (Years)
D
R
L

Figure 3: **Partisan disparities in the content and character of science used in policy.** (**A**) The distribution of congressional committee citations to science classified by whether the science is cited only by Republican-controlled committees, Democratic-controlled committees, or committees controlled by both parties, showing that on average only about 5.5% science used in policy sees bipartisan engagement. (**B**) Year-by-year estimates of the percentage of cited science that ever receives citations from both parties, showing the low degree of bipartisan engagement with the scientific literature is stable over time, hovering between 10%-15%. Note that the year-by-year estimates in (B) are higher than the overall average of 5.5% shown in (A), as it reflects the fact that papers cited by both parties tend to be re-cited year after year, highlighting again that only a small core set of papers see bipartisan use. (**C**) The distribution of think tank document citations to science classified by whether the science is cited only by left-of-center think tanks, right-of-center think tanks or both. (**D**) The temporal trend in the percentage of cited science that ever receives citations from both left- and right-of-center think tanks. (**E, G**) Two-dimensional t-SNE visualizations of the SPECTER embeddings of all scientific articles cited by the House Energy and Commerce Committee when under the control of Democrats (E) and Republicans (G). (**F**) The distributions of topic clusters in (E) and (G), showing clear differences in the content of science used when the same committee was under Democratic and Republican controls. The bars are color-coded corresponding to clusters in (E, G). (**H, J**) Two-dimensional t-SNE visualizations of the SPECTER embeddings of all scientific articles cited by the left-of-center think tanks (H) and right-of-center think tanks (J) in documents about weather issues. (**I**) The distributions of topic clusters in (H) and (J), with color coding corresponding to clusters in (H, J). (**K**) A null distribution for categorical overlap across clusters by partisan-cited science drawn by permuting (k=100) the overlap statistic holding the marginal distributions of partisan citations constant for each committee. The full null we present in green pools across the nulls of each individual committee. Actual observed overlap in partisan-cited science across clusters for committees are plotted as red dots. (**L**) uses the same approach as (K) to derive a null distribution for categorical overlap across clusters by science cited by ideological think tanks for each issue. The overlap for each issue is shown in red. (**M, N**) shows the empirical cumulative density function for the ratio between the Cramer statistics and the permutation derived (α =.05) critical value for congressional committees (M) and think tanks (N). Values greater than 1 indicate significant differences in the high-dimensional distributions of cited science at conventional levels. (**O-R**) report differences in the probability to be a hit paper in science, field citation ratio, percent of papers that are preprints, and the average time to policy citation (in years) by whether they are cited by both Democratic and Republican committees or only committees of one party or the other with 95% bootstrapped CIs. Stars indicate statistical significance in pairwise t-tests. (**S-V**) report the same measures as in (**O-R**) but for think tanks.

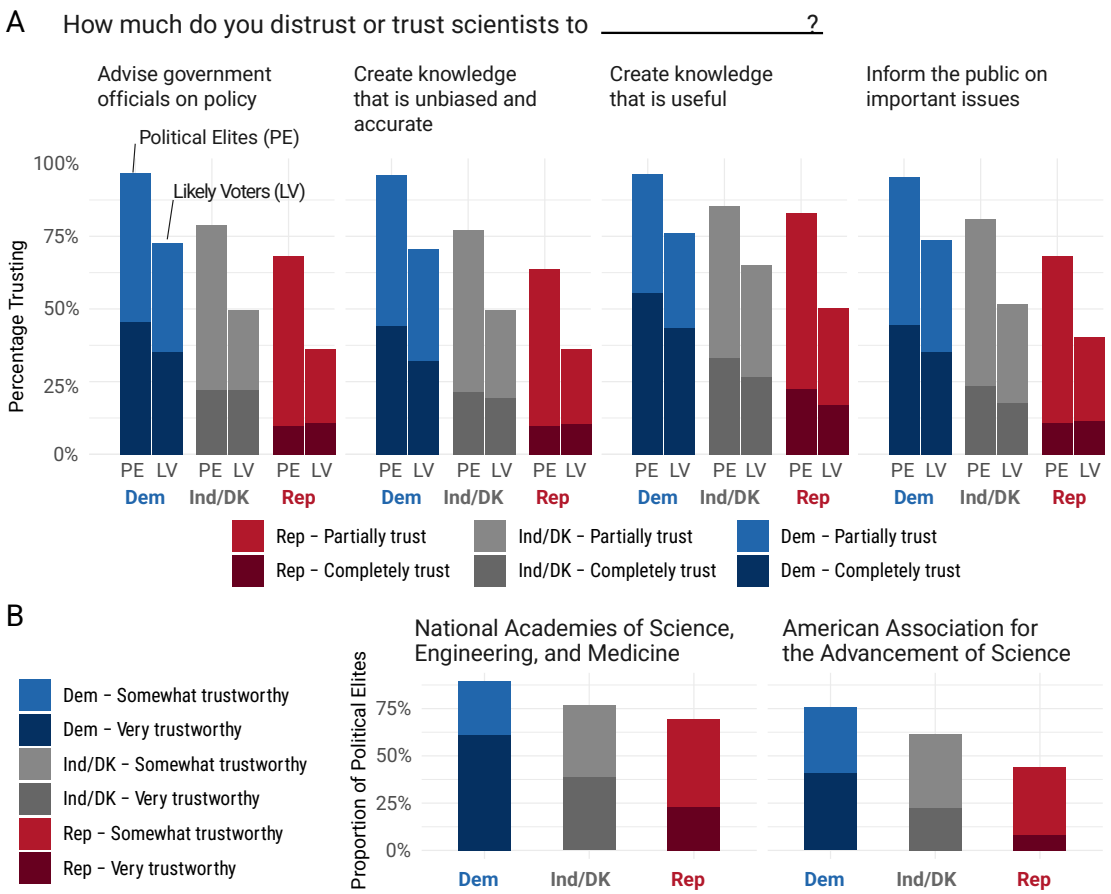

Figure 4. Partisan disparities in the trust of science among political elites. (**A**) The share of political elites' (PE) and likely voters' (LV) answering one of the top two categories of a 5-category likert-type scale of their level of trust in scientists to engage in four socially useful knowledge production activities and dissemination activities. Responses are shown separately for Democratic, Republican, and Independent/Don't Know partisan identifiers. Post-stratification survey weights were applied in all results shown. (**B**) shows political elites' evaluations of the trustworthiness of two high-profile scientific institutions (NAS and AAAS) on a 5-category likert-type scale, again with the bars representing the share of respondents rating the institutions in the top two categories of trustworthiness. Responses are shown separately for Democratic, Republican and Independent/Don't Know partisan identifiers. See SM Section 2 for more details.

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