



# THE STATE OF SCIENCE REPORTING IN TODAY'S DIGITAL MEDIA LANDSCAPE: A SURVEY OF JOURNALISTS AND SCIENTISTS WHO USE SCILINE'S EXPERT MATCHING SERVICE

Anthony Dudo, Joshua Anderson, Ashlee Bushee

## SUMMARY

The Center for Media Engagement surveyed journalists and scientists to better understand their experiences in the production of science news. This report is the third in a series of reports that have been produced in partnership with SciLine, an organization based at the American Association for the Advancement of Science (AAAS).

The quantitative findings detailed in this report (e.g., journalists feel moderately effective in their ability to report about science and only moderately supported in their efforts; journalists and scientists generally trust each other, although journalists' feelings of trust for scientists are mostly higher; journalists and scientists have strong, positive feelings of trust related to the SciLine service) support the previous two reports where journalists and scientists were interviewed about their experiences working with one another and their experiences using SciLine's expert matching service. We identified nine key findings from the survey data that suggest the following recommendations for journalists, scientists, and SciLine:

- SciLine can help support journalists who feel they are somewhat alone in producing science news by evolving and/or developing services that build networks and community.
- Although scientists and journalists largely reported positive experiences interacting with one another, this relationship may be improved by setting clear expectations regarding scientists' limited influence over the story.
- Scientists and journalists rate the importance of communication goals and stakeholders similarly, but journalists think scientists should focus more on broadening participation in science communication.
- SciLine could offer or support more communication training opportunities for scientists, including training on how to evaluate whether a journalist requesting an interview would be a good match.
- SciLine should emphasize the value of participating in the expert matching service to scientists while maintaining quality for journalist users.

## SUGGESTED CITATION:

Dudo, A., Anderson, J., & Bushee, A. (June, 2024). The state of science reporting in today's digital media landscape: A survey of journalists and scientists who use SciLine's service. Center for Media Engagement. <https://mediaengagement.org/research/journalist-scientist-sciline-survey>

## BACKGROUND

Journalists and scientists are essential actors in the production of science news. Historically, journalists have used scientists as key sources for news articles about science topics and scientists have participated in interviews as a primary form of engagement with the public.<sup>1</sup> While journalists and scientists may value one another in the context of science news, scholars have pointed out tensions relating to how journalists and scientists understand one another's role in the production of science news and their abilities to understand science topics and public communication, respectively.<sup>2</sup> However, the contemporary science media environment is quite different from the context in which many of these studies were conducted. While science news was historically reported by specialized science journalists, it is now often covered by reporters who may not be as experienced in covering science topics.<sup>3</sup> Additionally, digital media technologies now allow scientists to communicate directly with the public in ways that were not previously possible.<sup>4</sup> These same digital technologies have allowed for the proliferation of niche science news outlets that may compete with legacy media institutions.<sup>5</sup>

These changes in the science news ecology suggest a need to conduct research that updates our understanding of the production of science news from the perspective of the groups of actors that produce it.

We have addressed this research gap in previous reports of interview studies with [journalists](#) and [scientists](#) who have participated in the SciLine expert matching service that helps journalists find scientists who can serve as expert sources. In these studies, we presented narrative data that detailed the experiences of scientists and journalists in a science media environment that is marked by increasingly less stable legacy media institutions and greatly affected by the COVID-19 pandemic and subsequent lack of public trust in science news. That said, the qualitative nature of these studies left open questions such as the prevalence of key attitudes and perceptions relevant to the production of science news among scientists and journalists.

To address these questions, the Center for Media Engagement developed a web-based survey of journalists and scientists who have participated in SciLine's expert matching service at least once. Specifically, this survey focused on questions relating to: scientists' and journalists' (1) experience using SciLine's expert matching service, (2) experience working with one another to produce science news stories, (3) perceived trust in one another, (4) perceived skills and attitudes related to science journalism, and (5) perceptions related to public engagement with science generally.

## KEY FINDINGS AND RECOMMENDATIONS

### *Key Findings*

- Journalists feel moderately effective in their ability to report about science; there are opportunities to increase their feelings of occupational efficacy.
- Journalists feel only moderately supported when it comes to reporting about science; there are opportunities to lessen feelings of occupational isolation.
- Journalists and scientists describe their recent interactions with each other as predominantly positive (e.g., respectful, pleasant, accommodating).
- Only half of scientists regularly vet journalists before agreeing to do an interview.
- Journalists and scientists generally trust each other, although journalists' feelings of trust for scientists are mostly higher than vice versa.
- Journalists and scientists have similar views on which stakeholders are the most important for science communication (e.g., policymakers, youth/students, media professionals) and the least important (e.g., private sector, people from specific values-focused identity groups).
- Journalists and scientists have similar views on the most important goals for science communication (e.g., increasing the likelihood that people consider scientific evidence when making decisions) and the least important (e.g., listening to what others think about scientific issues, ensuring that scientists make the best possible research decisions).
- Journalists and scientists both strongly agree that scientists should receive training on becoming better communicators.
- Both journalists and scientists have strong, positive feelings of trust related to the SciLine service, although journalists' feelings of trust are slightly higher.
- Journalists overwhelmingly regard the SciLine service as being helpful, fast, and accessible.
- Of the various services provided by SciLine, journalists most value their help identifying relevant and responsive experts.
- Journalists are 83% more likely to reach out to a scientist whom they found through SciLine than at another place.
- Fifty percent of scientists say they are somewhat or much more likely to accept an interview request from a journalist sent by SciLine.

## *Recommendations*

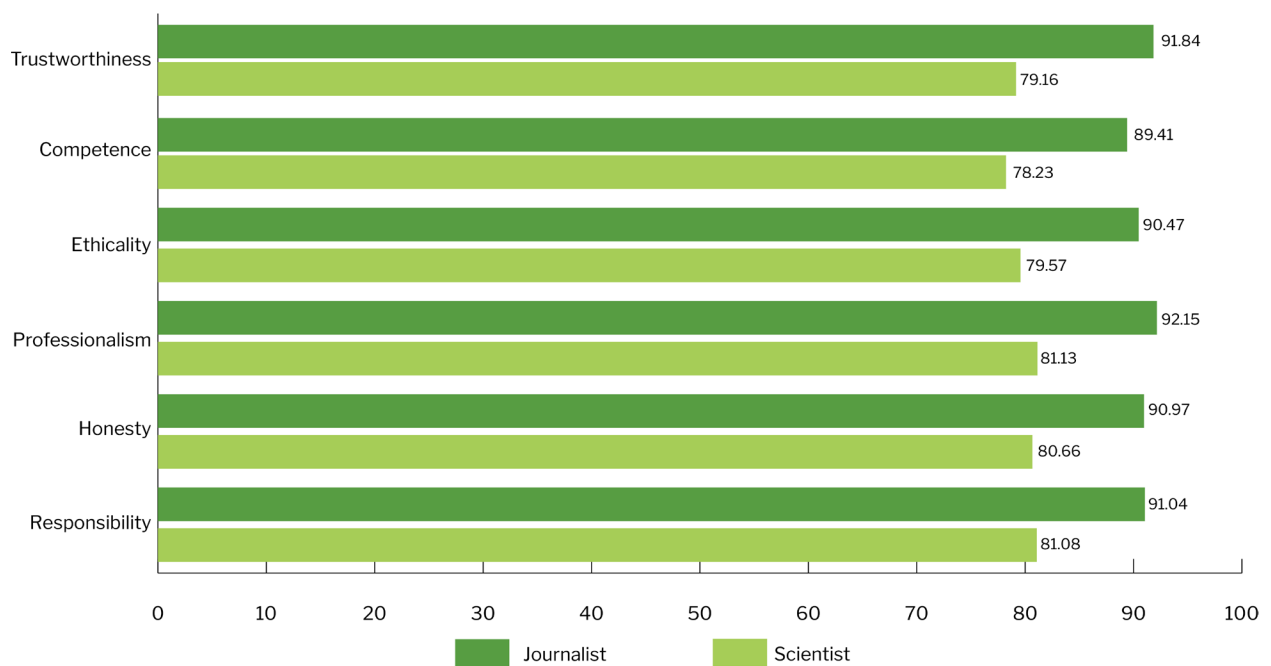
- SciLine can help support journalists who feel they are somewhat alone in producing science news by evolving and/or developing services that build networks and community.
- Although scientists and journalists largely reported positive experiences interacting with one another, this relationship may be improved by setting clear expectations regarding influence over the story.
- Scientists and journalists rate the importance of communication goals and stakeholders similarly, but journalists think scientists should focus more on broadening participation in science communication.
- SciLine could offer or support more communication training opportunities for scientists, including how to evaluate if a journalist requesting an interview would be a good match.
- SciLine should emphasize the value of participating in the expert matching service to scientists while maintaining quality for journalist users.

# THE RESULTS

## Scientists and Journalists Report Highly Positive Experiences With SciLine

To understand perceptions of the SciLine service, journalists and scientists were asked to rate SciLine on several scales: trustworthiness, professionalism, ethicality, responsibility, competence, and honesty. Overall, scientists and journalists both reported highly positive feelings about SciLine across all six characteristics. For each of the six characteristics, however, journalists evaluated SciLine significantly more positively than scientists.

**Feelings of Journalists and Scientists Regarding SciLine**

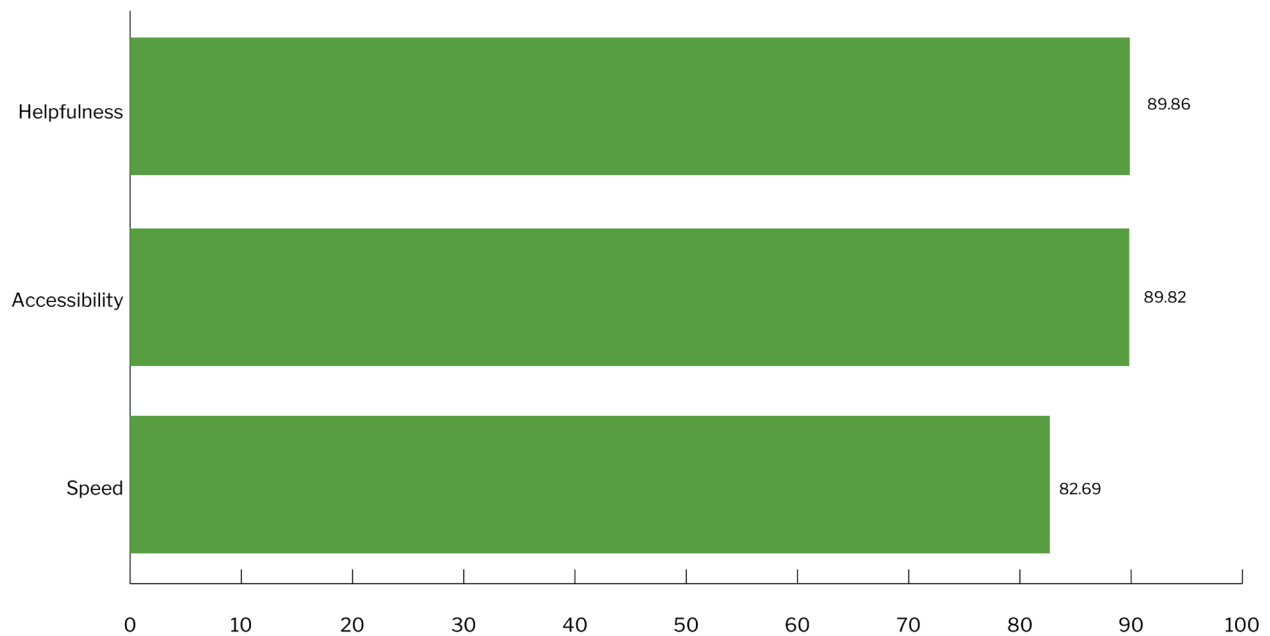


**Data from the Center for Media Engagement**

Notes: All participants were asked to evaluate SciLine in terms of trustworthiness, professionalism, ethicality, responsibility, competence, and honesty on a scale from 0 (*most negative*) to 100 (*most positive*). Across each scale, journalists evaluated SciLine more positively than scientists at  $p < .001$ .

We also asked journalists additional questions about the perceived helpfulness, speed, and accessibility of the SciLine service. Similar to the responses given for the questions that were asked to both groups, journalists evaluated SciLine positively across these characteristics. Although the rating for speed was slightly lower than helpfulness and accessibility, it is still highly positive.

### Feelings Regarding SciLine (Journalists Only)

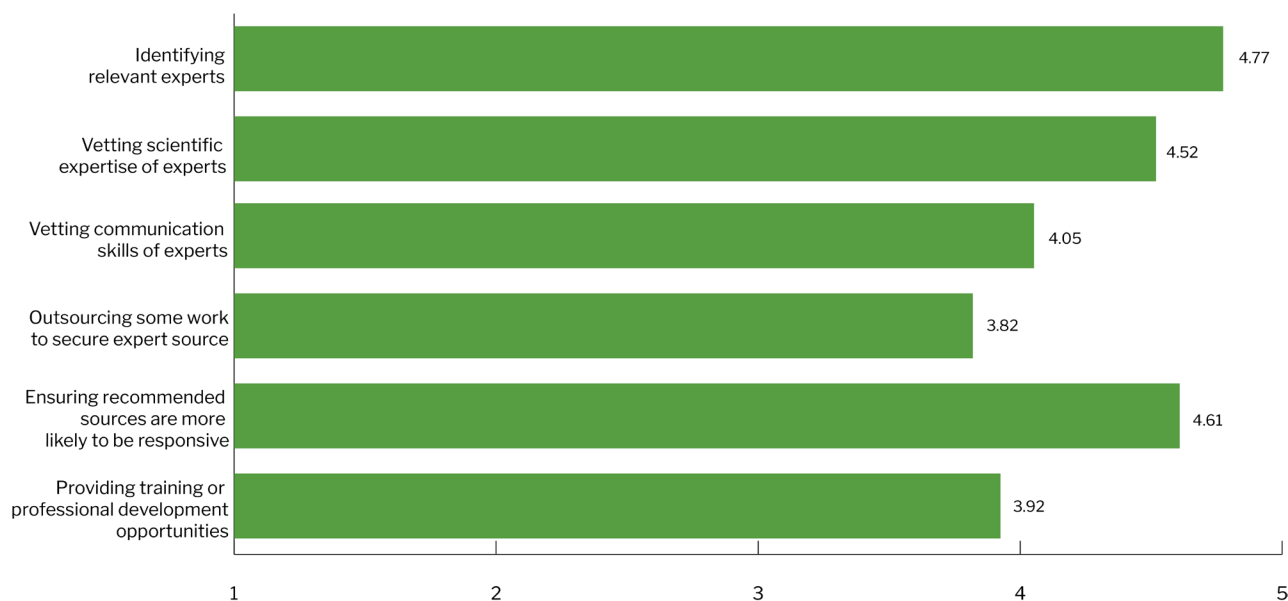


#### Data from the Center for Media Engagement

Notes: Journalists were asked to evaluate SciLine in terms of helpfulness, speed, and accessibility on a scale from 0 (most negative) to 100 (most positive).

When journalists were asked to weigh in on the importance of various aspects of SciLine’s service — vetting scientific expertise, evaluating the communication skills of experts, providing professional development opportunities, outsourcing some of the work to secure expert sources, identifying relevant experts, and ensuring recommended sources are more likely to be responsive — they rated identifying relevant experts as most important. This was closely followed by ensuring that sources are responsive and vetting the expertise of sources. Vetting communication skills and providing training for professional development were rated as the fourth and fifth most important functions, respectively. Although not rated low by journalists, outsourcing work to secure a source was the least important function.

### Perceived Importance of Expert Matching Service Functions for Journalists

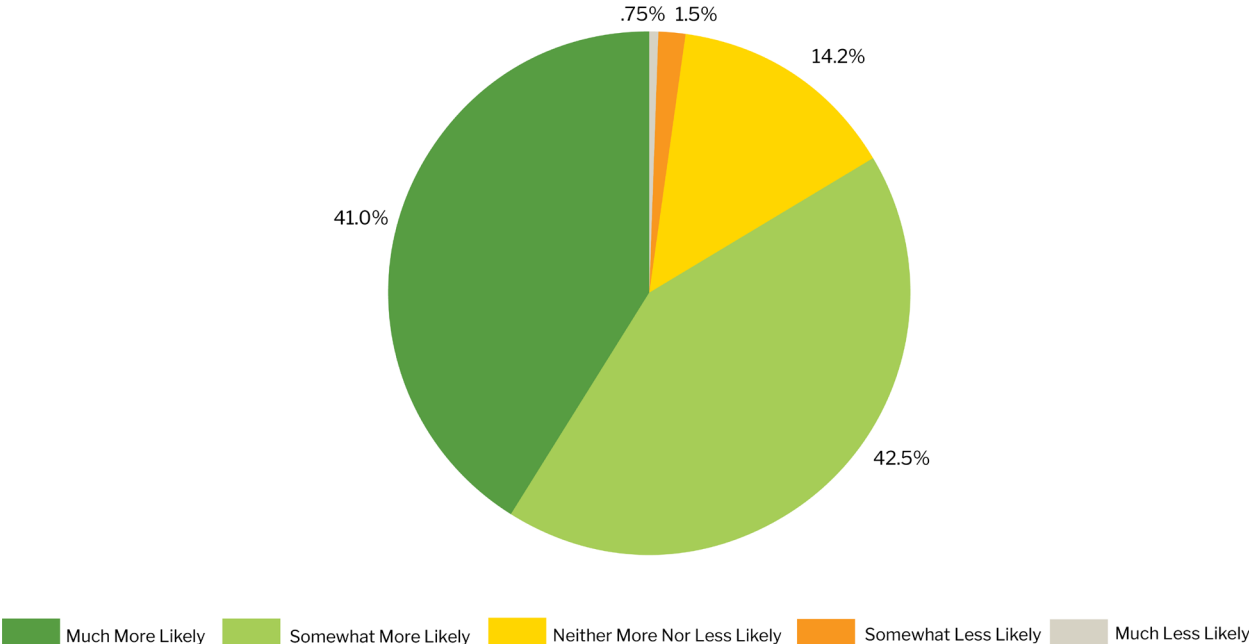


#### Data from the Center for Media Engagement

Notes: Journalists were asked to rate the importance of different functions of an expert matching service such as the one offered by SciLine on a scale from 1 (*very unimportant*) to 5 (*very important*).

When asked about the chance that journalists would reach out to expert sources recommended by SciLine compared to sources they found elsewhere, journalists reported a strong preference for SciLine-recommended sources; 83.5% of participants reported that they were at least somewhat more likely to reach out to SciLine experts and only 2.2% reported that they were at least somewhat less likely.

**Journalist Likelihood to Reach Out to a Scientist Referred by SciLine**

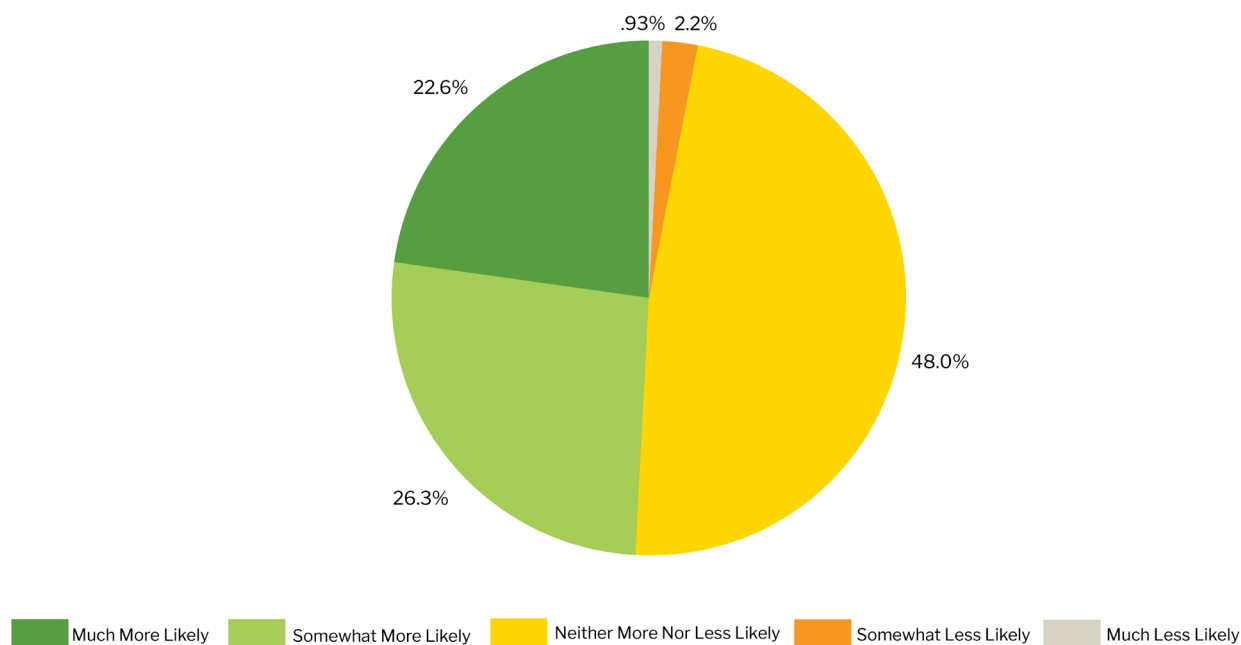


**Data from the Center for Media Engagement**

Scientists also reported that they preferred to connect with journalists using SciLine’s service rather than with journalists connected through other sources, though this is less significant than the preference journalists reported for scientists connected through SciLine. About half of scientists reported that they would be at least somewhat more likely to accept interview requests from journalists using SciLine’s service than from other journalists.



## Scientist Likelihood to Accept an Interview Request from a Journalist Sent to Them by SciLine



Data from the Center for Media Engagement

### Journalist Respondents Have a Broad Range of Experience and Often Specialize in Science News

We asked journalists who had used the SciLine service to provide additional information about their careers and where science journalism fits into their work. When asked about occupational roles, the most common answers were reporter (83.02%) and editor (13.84%). The majority of journalists we surveyed primarily worked on digital platforms (74.38%), half (50.0%) worked in a print medium, and fewer worked primarily in audio-only media (18.12%) or television (6.88%). The sample included a broad range of experience in the journalism industry. The majority of respondents had between 1 and 15 years of experience (median = 11 years), however, some journalists had as much as 50 years of experience.

Our sample of journalists was roughly equally divided between those who consider themselves to be freelancers and those who do not. Of the journalists who participated in the survey, 57.3% responded that they were not freelancers, 36.9% identified themselves as freelancers, and 5.7% considered themselves as somewhat freelancers.

Turning to the science specialization, 55.4% of the journalists we spoke with identified as science specialists, 22.3% identified as being somewhat of a specialist, and only 21.1%

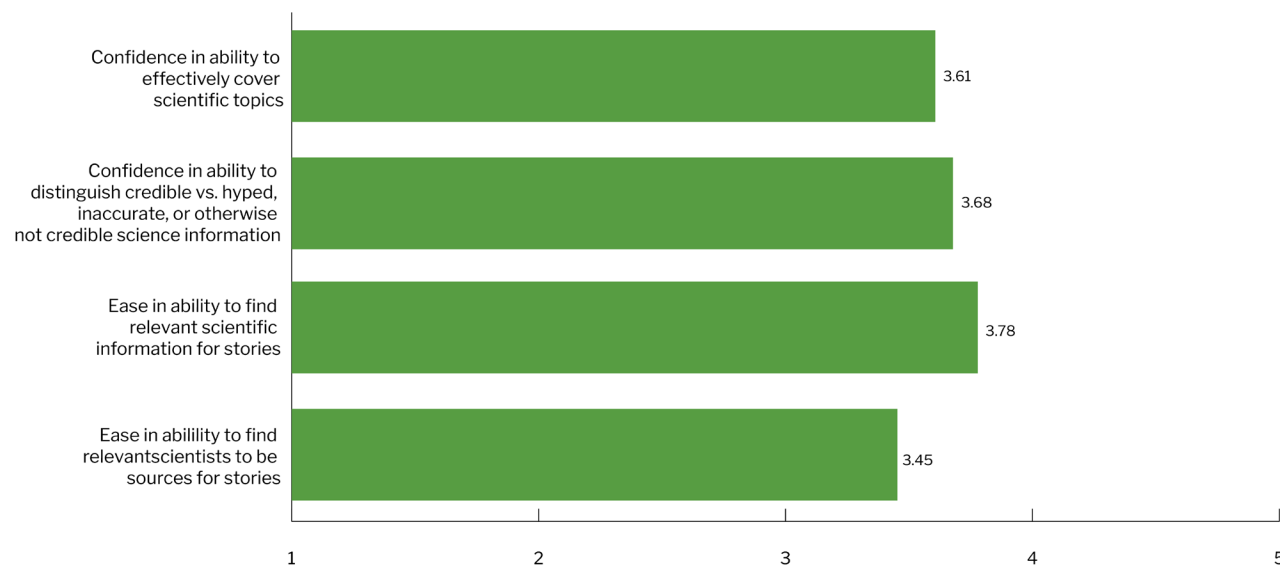
identified as not being a specialist. That said, when asked about formal education in science, technology, engineering, or math, 48.0% of the journalists we surveyed indicated a moderate amount or more of formal science education and 51.9% indicated that they had only a little bit of formal science education or none at all.

## Journalists’ Skills, Efficacy, and Support Related to Reporting Science

We asked journalists about their perceived *self-efficacy*, in this study referring to journalists’ confidence in their ability to effectively report about scientific topics, and their *response efficacy*, referring to journalists’ confidence related to how their reporting will impact their audience. We also asked about their discrete skills related to reporting science stories and their perceived levels of support for reporting science news.

Journalists reported having moderate confidence in each of the four skills we asked them to evaluate. They rated their ability to find relevant scientific information highest and their ability to find relevant expert sources lowest. Their perceived ability to distinguish between credible and non-credible scientific findings and to cover scientific topics were second and third highest, respectively.

### Journalist Self-Reported Skills

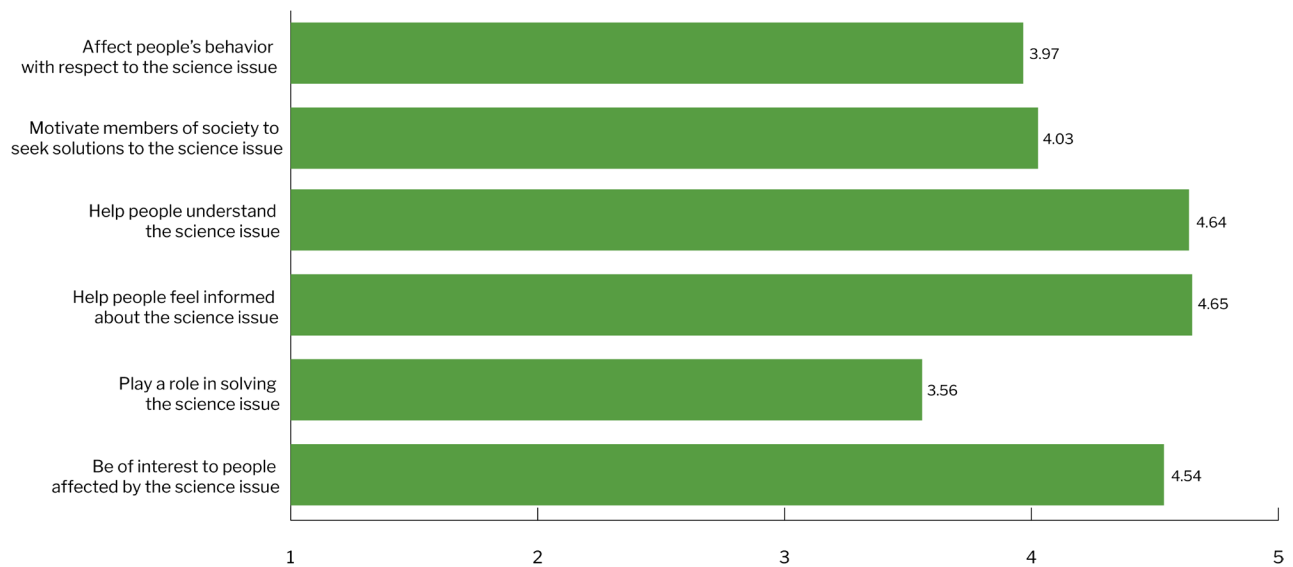


Data from the Center for Media Engagement

Notes: Journalists were asked to rate their confidence in their ability to effectively cover scientific topics and to accurately distinguish credible science information from information that is hyped, inaccurate, or not credible on a scale from 1 (*not confident at all*) to 5 (*extremely confident*). They were asked to rate how easy it would be for them to find relevant scientist sources and how easy it would be for them to find relevant scientific information on a scale from 1 (*extremely difficult*) to 5 (*extremely easy*).

Journalists reported high *response efficacy* concerning their science reporting across six metrics. Informational metrics like helping readers stay informed about science issues and helping them understand science issues were rated highest, though these were closely followed by their perceived ability to generate interest in science issues. Behavior change measures were generally lower, including motivating people to seek solutions to science issues, affecting people’s behaviors, and, especially, solving science issues.

### Journalists’ Belief That Their Science Journalism Activities Can...

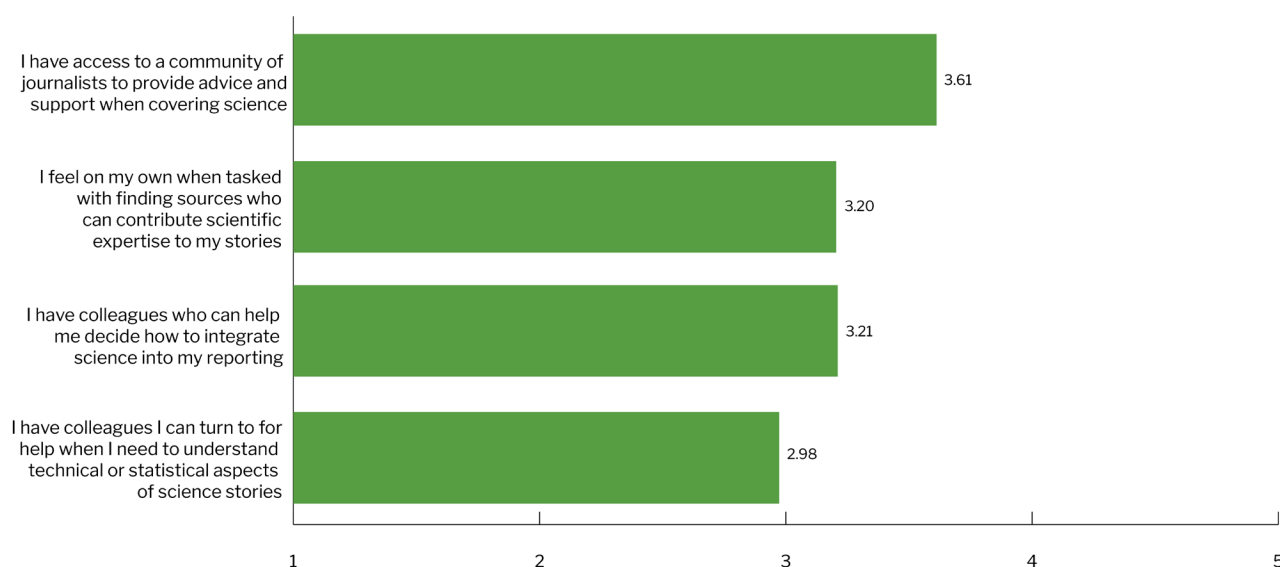


Data from the Center for Media Engagement

Notes: Journalists were asked to rate their science journalism efficacy across different measures on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

Journalists indicated generally equal and middling support for covering science topics across certain metrics. The highest reported measure of support was for access to a community of peers, followed by colleagues who can help them integrate science reporting or who can help them understand technical information. That said, journalists also reported feeling somewhat alone in their science reporting.

### Journalists' Belief That They are Supported in Various Aspects of Science Reporting



Data from the Center for Media Engagement

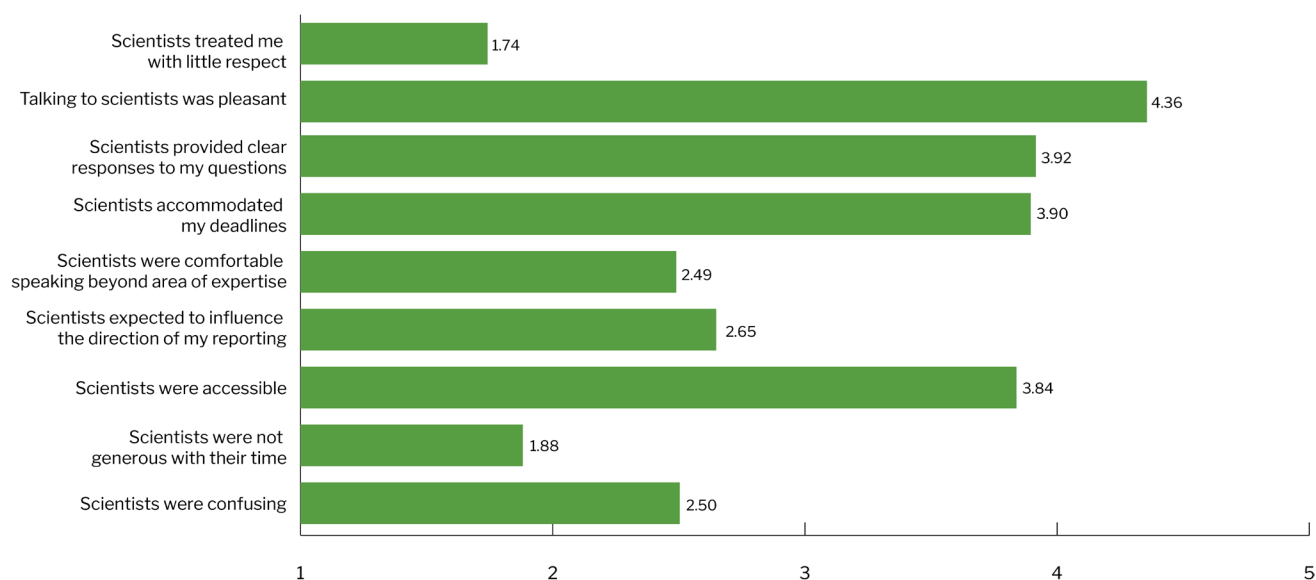
Notes: Journalists were asked to rate their support in various aspects of science reporting on a scale from 1 (strongly disagree) to 5 (strongly agree).

### Scientists and Journalists Report Highly Positive Experiences Working With One Another

We asked journalists and scientists about their experiences contributing to science news stories. Both groups reported generally positive experiences interacting with each other. Among journalists, 95.9% reported somewhat or extremely positive experiences interacting with scientists, compared to 0.7% who reported somewhat negative experiences and 3.5% who reported neither negative nor positive experiences. Scientists were only slightly less positive than journalists, 90.7% reported having somewhat or extremely positive experiences with journalists compared to 2.9% who reported somewhat negative experiences and 6.4% who reported neither negative or positive experiences. No participants reported extremely negative experiences with the other group.

Scientists and journalists both reported specific positive experiences as more common than specific negative experiences. The most commonly reported positive experience that journalists had with scientists was that they were pleasant to talk to, while the most common negative experience was scientists attempting to influence the direction of the story. Scientists also reported pleasant conversations with journalists as the most common positive experience and their most commonly reported negative experience was that they felt important information was omitted from the final story.

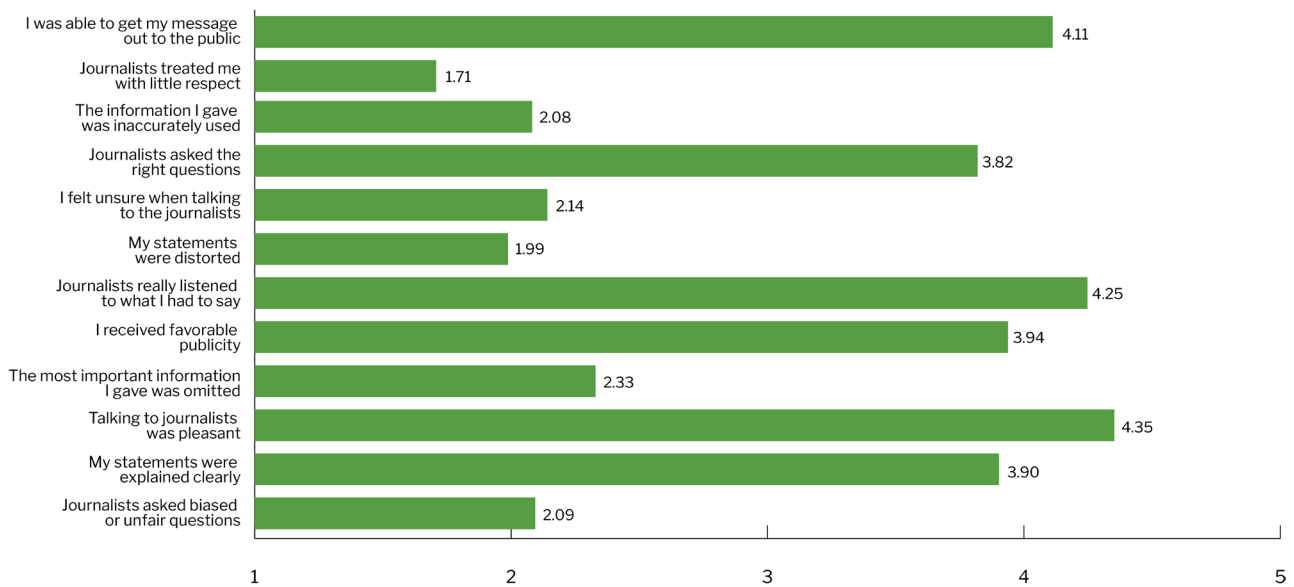
### Journalists' Reactions to Previous Interactions with Scientists



#### Data from the Center for Media Engagement

Notes: Journalists were asked to assess their previous encounters with scientists on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

## Scientists' Reactions to Previous Interactions with Journalists



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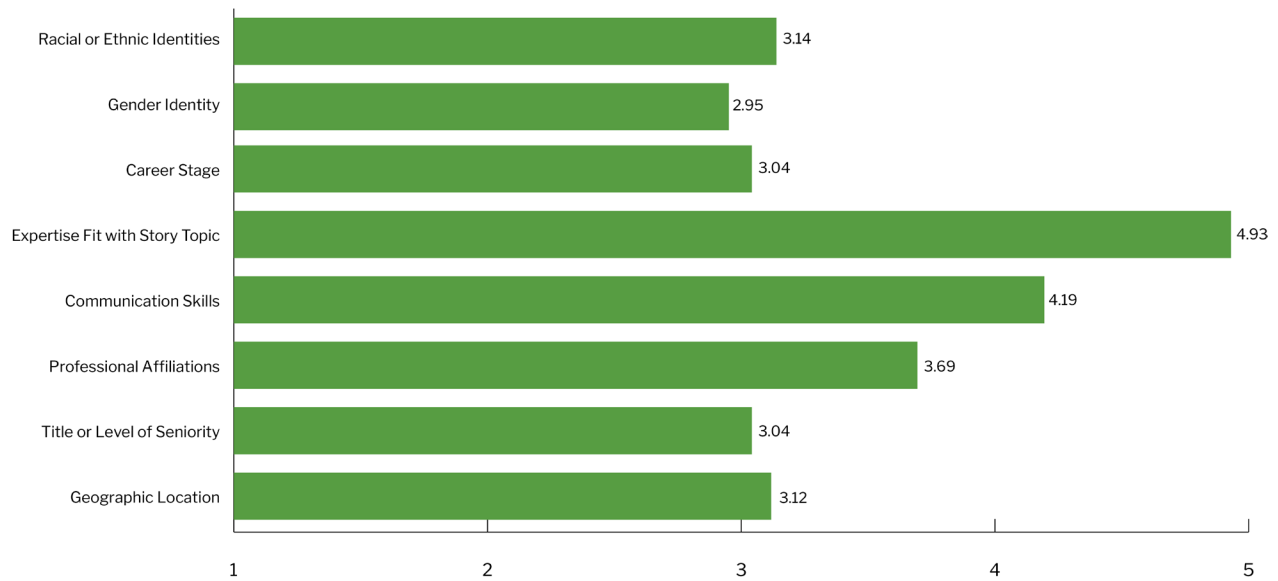
Further examining the question of how much influence scientists expected to have over the direction of stories in which they are quoted, 50.4% of scientists reported that they desired at least moderate influence, 10.7% desired a lot of influence, and 3% desired complete influence (i.e., being able to approve the final story).

Additionally, scientists appeared inconsistent in terms of how often they vet journalists before agreeing to do an interview. Only 13% of scientists indicated that they always vet journalists, while the majority of respondents (56%) indicated that they never (16.4%) or sometimes (39.6%) vet journalists. Finally, an overwhelming 87.5% of scientists reported that they would not need to seek approval from their employer before speaking to the media.

## Scientists and Journalists are Motivated to Participate in Interviews to Match Expertise to Story Topics

We examined the motivations that journalists cited for reaching out to particular scientists and that scientists had for accepting an interview request from a journalist. For both journalists and scientists, the strongest motivating factor was the alignment between the story and the scientist's expertise. Journalists highly prioritized the communication skills of the scientist and were comparatively less motivated by factors like the scientist's gender identity. Scientists commonly considered the outlet that the journalist was working for but reported less emphasis on factors related to their personal benefit including professional benefits and the elevation of their profile.

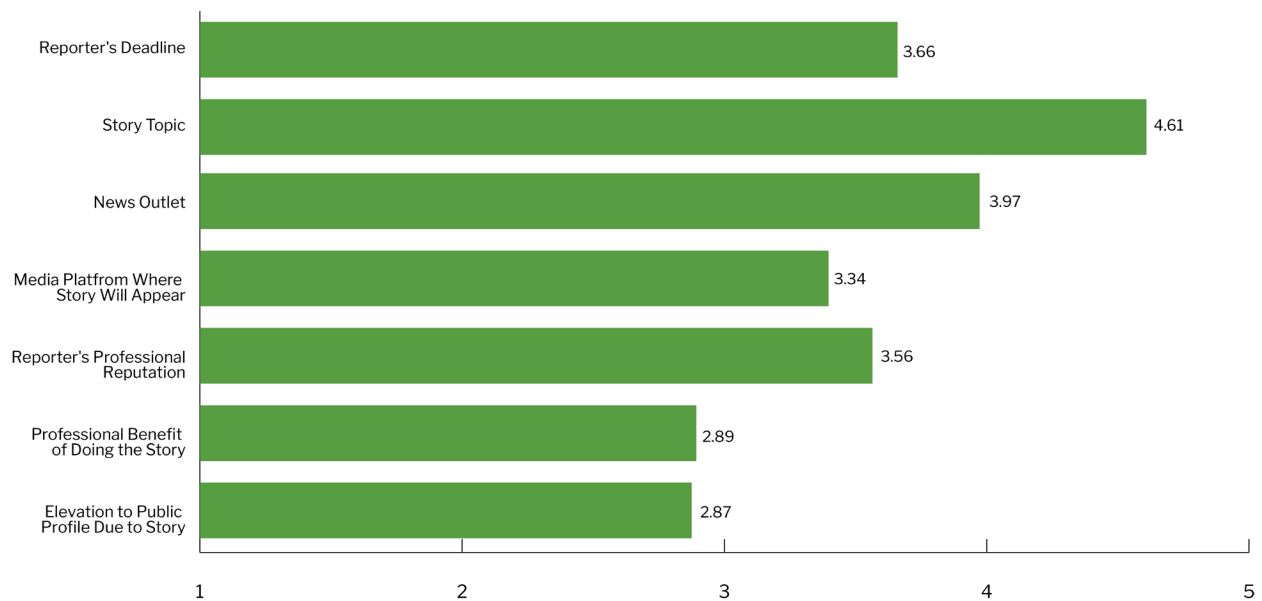
## Important Factors in Determining the Scientists That Journalists Reach Out To



Data from the Center for Media Engagement

Notes: Journalists were asked to evaluate the importance of factors in determining scientists that they reach out to on a scale from 1 (*very unimportant*) to 5 (*very important*).

## Important Factors in Determining Whether a Scientist Accepts a Journalist Interview



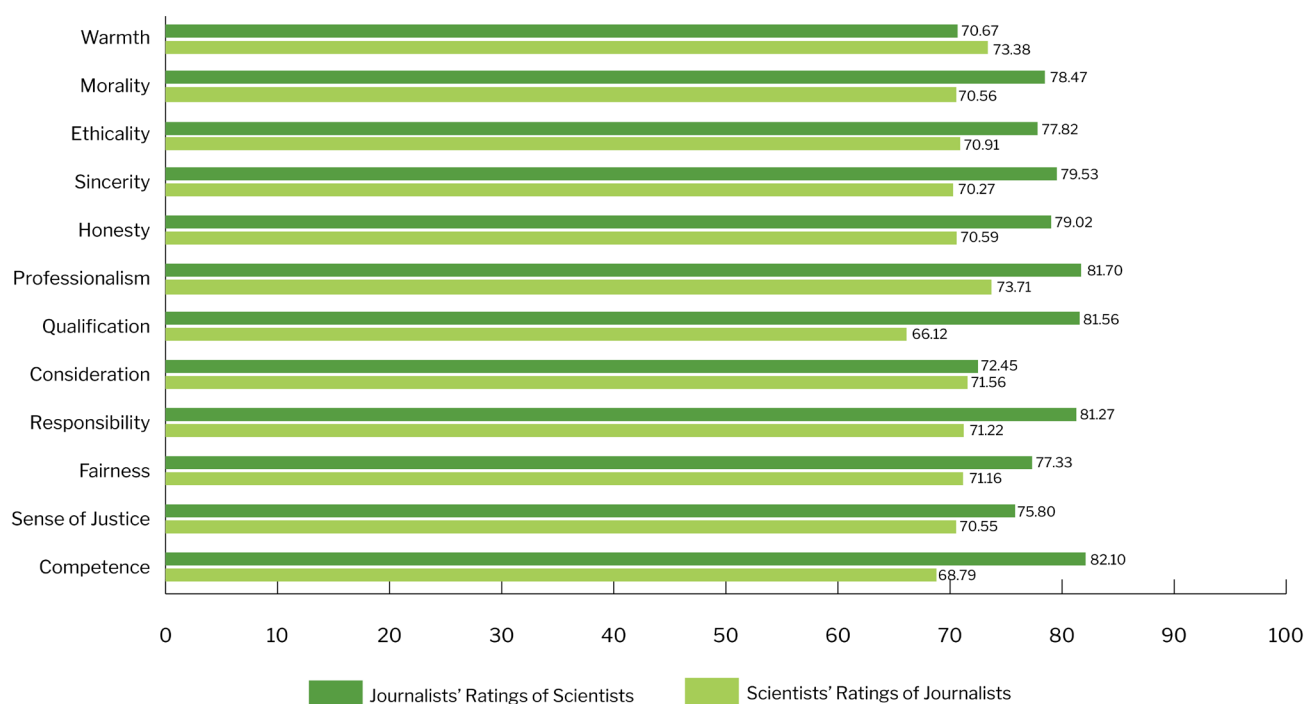
Data from the Center for Media Engagement

Notes: Scientists were asked to evaluate the importance of factors in determining whether or not they decide to accept an interview request from a journalist on a scale from 1 (*very unimportant*) to 5 (*very important*).

## Scientists and Journalists Trust One Another, But Journalists are More Trusting

We surveyed scientists and journalists regarding their feelings of trust towards one another across 12 measures: qualifications, professionalism, sense of justice, fairness, ethicality, responsibility, sincerity, considerateness, competence, morality, honesty, and warmth. Scientists and journalists generally reported high measures of trust in one another. However, journalists reported higher trust in scientists than scientists did in journalists for all but one of these measures: warmth. The largest differences were perceptions that the other group was qualified and competent.

### Trust Between Scientists and Journalists



### Data from the Center for Media Engagement

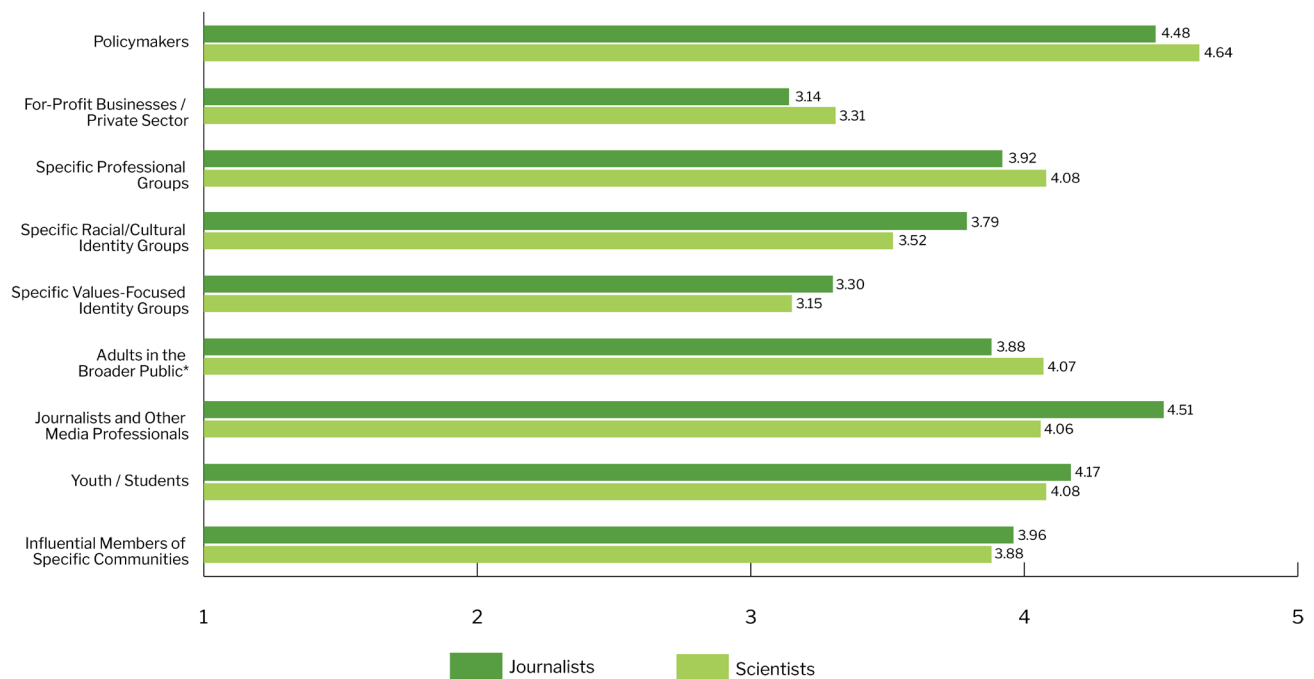
Notes: All participants were asked to evaluate members of the other group (scientists for journalists and journalists for scientists) across measures of perceived trust on a scale from 0 (*most negative*) to 100 (*most positive*). Journalists evaluated scientists as more fair and ethical than scientists evaluated journalists at  $p < .05$ . Journalists also evaluated scientists as more moral than scientists evaluated journalists at  $p < .01$ , and more qualified, professional, responsible, sincere, competent, and honest than scientists evaluated journalists at  $p < .001$ . Perceptions of warmth for the other group were not statistically significantly different from one group to the other.



## Scientists and Journalists Largely Agree on Key Stakeholders for Science Communication

We asked respondents which stakeholders are the most important for scientists to communicate with. Policymakers were rated as the most important stakeholder group by scientists and the second most important group by journalists. Journalists and scientists differed on their perceived importance of media professionals as a stakeholder group, which was rated as the most important group by journalists but was only rated as the fifth most important group by scientists. Scientists and journalists significantly varied in the importance assigned to three other stakeholder groups, with scientists evaluating professional groups (e.g., medical professionals, lawyers) and adult members of the public higher than journalists. However, journalists evaluated members of specific racial and ethnic groups higher than scientists. Scientists and journalists assigned similar priorities to students, members of value-focus identity groups (e.g., religious organizations), influential community members (e.g., tribal elders), and for-profit businesses.

### Stakeholders Most Important for Scientists to Communicate With



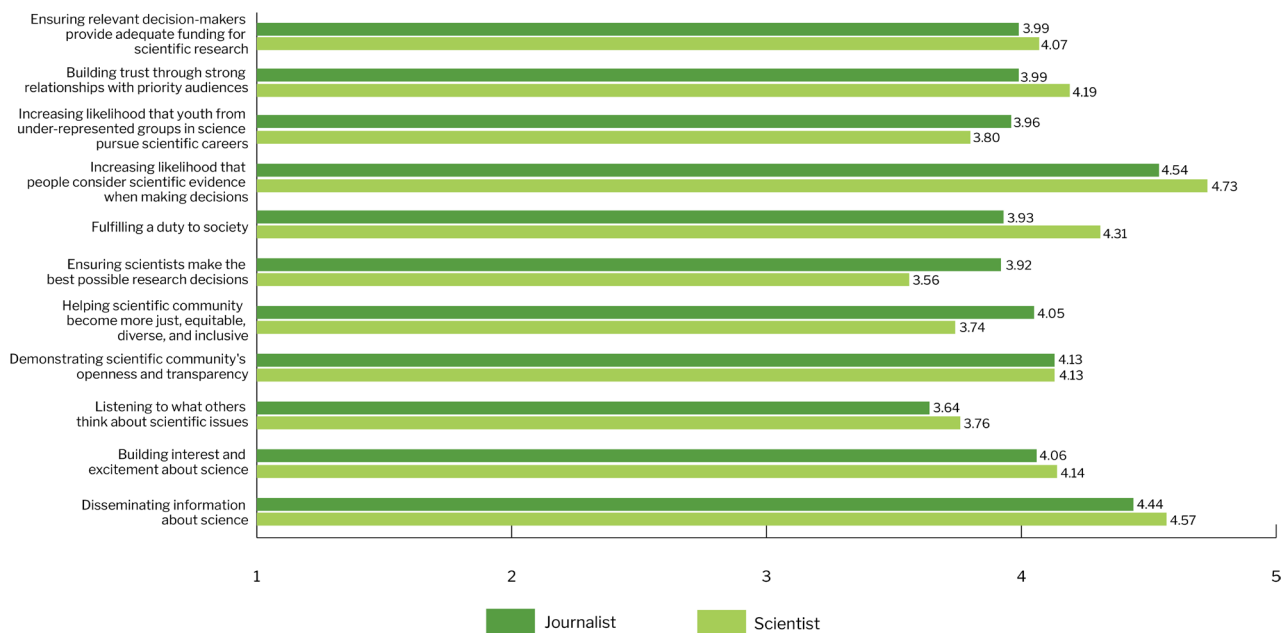
#### Data from the Center for Media Engagement

Notes: All participants were asked to evaluate the importance of stakeholder groups for science communication on a scale from 1 (*very unimportant*) to 5 (*very important*). Scientists rated policymakers, people in specific professional groups, and adult members of general society as more important stakeholders than journalists did at  $p < .05$ . Journalists rated people from specific racial/cultural groups as more important stakeholders than scientists did at  $p < .01$ . Journalists also rated journalists as more important stakeholders than scientists did at  $p < .001$ .

## Scientists and Journalists Largely Agree on Key Goals for Science Communication

We surveyed both journalists and scientists to assess what each group perceived as the most important communication goals for scientists. Both groups identified the most important goal to be increasing the likelihood that people consider scientific evidence when making decisions, though scientists viewed this goal as significantly more important than journalists. For both groups, this was followed by disseminating information about science, which scientists and journalists evaluated similarly. While scientists and journalists both rated guiding decisions made by scientists as the least important goal, journalists rated this goal significantly higher than scientists. Journalists also rated the promotion of diversity, equity, and inclusion in the scientific community higher than scientists, while scientists rated fulfilling a duty to society and building trust with audiences higher than journalists.

### Perceived Importance of Science Communication Goals for Scientists



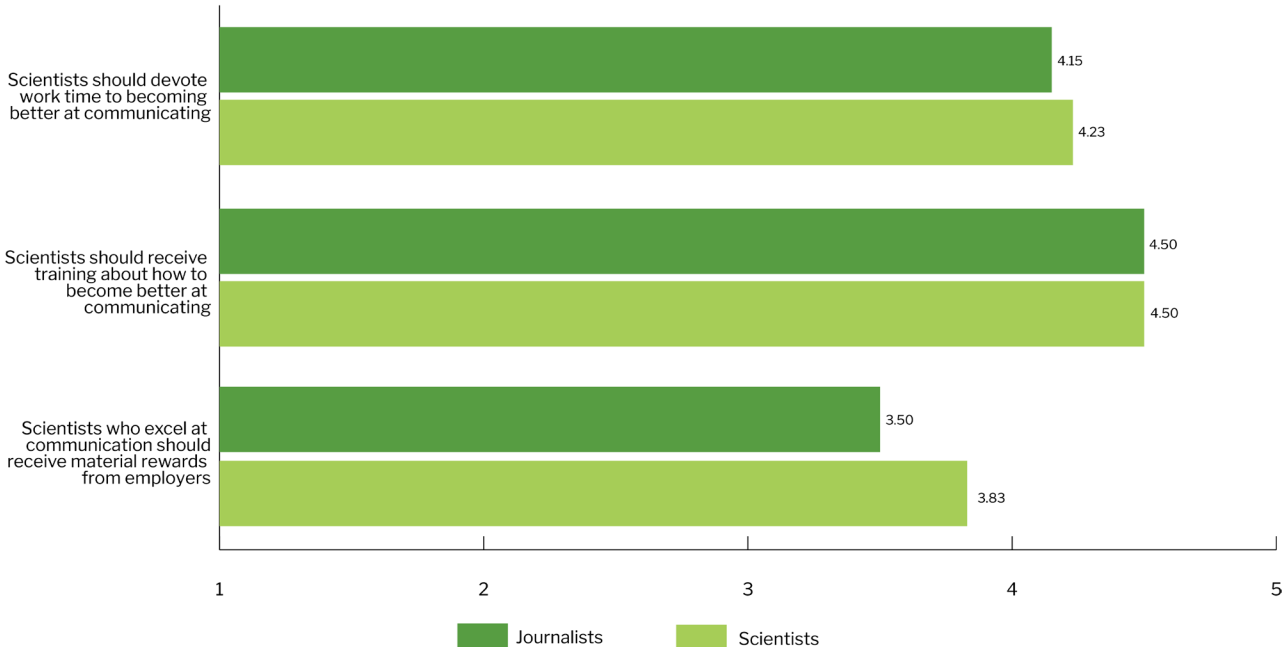
#### Data from the Center for Media Engagement

Notes: All participants were asked to evaluate the importance of science communication goals on a scale from 1 (*not at all important*) to 5 (*very important*). Scientists rated building trust with priority audiences as a more important goal than journalists did at  $p < .05$ , in addition to increasing the likelihood that people consider scientific evidence when making decisions at  $p < .01$ , and fulfilling a duty to society at  $p < .001$ . Journalists rated helping the scientific community make itself more just, diverse, and inclusive and ensuring that scientists make the best decisions as more important goals than scientists did at  $p < .001$ .

# Scientists and Journalists Agree on the Value of Communication Training for Scientists, But Few Scientists Report Extensive Training

When journalists and scientists were asked about communication training for scientists, both groups overwhelmingly and similarly agreed that scientists should receive training and that scientists should devote work time to becoming better at communicating. Although the view that scientists who excel at communication should receive material incentives from their employers was the least popular view for both groups, scientists agreed with this view at a significantly higher rate than journalists did.

**Views on Communication Training for Scientists**



**Data from the Center for Media Engagement**

Notes: All participants were asked to indicate their agreement with communication norms for scientists from 1 (*strongly disagree*) to 5 (*strongly agree*). Scientists agreed with the idea that scientists who excel at communication should receive material rewards from their employers more than journalists did at  $p < .01$ .

Communication training, however, was not something commonly experienced among the scientists who participated in this survey. Slightly more than half of the scientists (53.7%) reported having one day of communication training or less, while 27% reported never having communication training. A small segment of scientists (12.3%) indicated that they received at least 10 days worth of communication training.

## RECOMMENDATIONS

### **SciLine Should Emphasize Its Value for Scientists to Participate in the Expert Matching Service While Maintaining Quality for Journalist Users.**

The results of this survey suggest that SciLine's expert matching service is overwhelmingly positively regarded by the journalists who use it. A majority of journalists reported that they were more likely to reach out to SciLine-curated experts for interviews than to other experts. The average responses of the journalists who participated in this study rated close to the highest possible response across all metrics related to their perceptions of SciLine's expert matching service, except for perceptions about the speed of SciLine's service, which were only rated slightly lower than other metrics. These data indicate that there may be little room for improvement of SciLine's expert matching service for journalists other than the speed at which they deliver expert sources to journalists.

Turning to our sample of scientists, SciLine's expert matching service was held in high regard by this group, though the average responses by scientists were rated slightly lower than those for journalists across all relevant metrics. Additionally, while about half of scientists reported that they were at least somewhat more likely to accept interview requests from journalists referred to them by SciLine than requests from other journalists, nearly as many scientists reported that they were neither more nor less likely. This finding may be further contextualized with our finding in a previous interview study that several of the scientists who have used SciLine's expert matching service did not perceive the quality of the journalists sent to them to be different from other journalists who requested expert interviews. Taken together, these findings suggest that SciLine has room to improve how they position their expert matching service for scientists.

One way that SciLine may do this is to emphasize that they offer their services only for reporters who write for quality news organizations. This is likely to be a resonant message for many scientists, as scientists reported that the outlet a journalist is writing for is the second most important factor in determining whether or not they accept an interview request (only after the fit of the story to their area of expertise), in addition to the finding from our previous report that the legitimacy of a journalist's outlet was a serious concern for scientists.<sup>6</sup> Additionally, SciLine may also communicate the care that they put into ensuring the match of a journalist's story to a scientist's area of expertise, which was valued not only by journalists but also by scientists.

### **SciLine Can Help Support Journalists Who Feel They Are Somewhat Alone in Producing Science News, Even if They Feel Like They Are Generally Effective.**

When examining the perceived efficacy, skills, and support that journalists possess when covering science issues, we revealed a nuanced picture of journalists' overall perceived

ability to effectively cover science and identified opportunities for SciLine to support them. Journalists reported generally high efficacy with respect to covering science, especially for informational outcomes like producing science news stories that are understandable, informative, and interesting to news readers. This finding somewhat contrasts with previous research which suggests that journalists see themselves as increasingly ill-equipped to effectively cover science and may, in part, be explained by the fact that the majority of respondents in this survey (see p. 9) consider themselves to be science reporting specialists.<sup>7</sup> However, the journalists appeared only moderately confident in the skills that are required to produce science stories. The skill that was the lowest among these was their ability to effectively find expert sources to interview for science stories, which may be a testament to the value of expert matching services such as those offered by SciLine. Finally, journalists reported levels of support when covering science stories which were slightly lower than their perceived skills. Journalists reported only moderate feelings of support for writing science stories from their colleagues and also reported feeling moderately alone in their work covering science. Journalists reported slightly higher levels of support from a broader community of journalists, which suggests SciLine could help journalists feel less alone in their science journalism work by providing services such as workshops, which a [previous study](#) showed as a valuable networking tool that helped journalists feel less isolated when covering science issues.

**While Scientists and Journalists Largely Reported Positive Experiences Interacting With One Another, This Relationship May Be Improved By Journalists Setting Clear Expectations Regarding Influence Over the Story and Building Trust With Their Sources.**

The journalists and scientists who participated in this survey both reported highly positive experiences with each other and trust in one another. While this finding contrasts with research that has explored points of conflict between journalists and scientists, it is largely consistent with our qualitative studies of journalists and scientists in which participants among both groups emphasized that the majority of their interactions were positive. These reports emphasized that while negative interactions were rare, they may be highly impactful, and often dealt with differing views over the direction of the news story. This is bolstered by the findings of this report, in which the most common negative experiences reported by both scientists and journalists pertained to the content and direction of news stories. Scientists commonly expressed a desire to influence the direction of news stories. Returning to the results of our previous report, journalists may not find it possible or desirable to give this degree of agency to their expert sources. These findings suggest that a possible means of improving the relationship between scientists and journalists is setting clear expectations for the direction of the story and how an expert's words may be used. Even if journalists may not grant the desired level of agency in the direction of the

story to their sources, they may maintain the health of this relationship by building trust. While scientists and journalists who participated in this survey appeared to largely trust one another, scientists generally have lower trust in journalists than vice-versa, especially for areas that indicated professional competence. One possible way that journalists may improve their relationships with their expert sources is by emphasizing their credentials and ability to effectively understand and write about science issues. Another way is for journalists to more clearly communicate the parameters of the reporting process to scientists, especially regarding how experts can contribute to that process.

### **Scientists and Journalists Rate the Importance of Communication Goals and Stakeholders Similarly, But There are Some Notable Differences Related to Equity and Broadening Participation in Science Communication.**

Overall, scientists and journalists held largely similar perspectives about the communication goals that scientists should prioritize and the stakeholders that they should target in their communication. Journalists, however, saw more opportunities for scientists to pursue communication goals (e.g., making the scientific community more just, equitable, diverse, and inclusive) and engagement with stakeholder groups (e.g., people from specific racial and cultural identity groups) that may improve the ways that the scientific community serves people from historically marginalized groups. Journalists also saw more opportunities for scientists to communicate in ways that would help them evaluate the soundness of their research decisions. Together, these significant differences suggest that journalists believe that scientists should more often be approaching their public communication in ways that broaden participation in discussions about scientific topics and that, ultimately, help shape decisions about scientific research. One implication associated with this difference is to provide communication training (discussed below) that helps scientists expand their understanding of who they can seek to connect with and what they can seek to accomplish through their public communication efforts, especially when it comes to making science more inclusive and responsive.

### **SciLine Could Offer More Communication Training Opportunities for Scientists, Including How to Evaluate if a Journalist Requesting an Interview Would Be a Good Match.**

A final recommendation from this report pertains to formal communication training for scientists, which journalists and scientists both reported to be valuable for scientists. Despite both groups finding communication training to be valuable, most scientists who participated in the survey reported receiving one day or less of formal communication training. This finding suggests that SciLine has an opportunity to provide communication training – either directly or indirectly through a partner – for scientists who participate in the service, as well as to emphasize the value that such training can have for scientists. One key

value that such communication training might emphasize is how scientists can learn to vet journalists before agreeing to interviews. In our previous reports, scientists detailed how vetting was a valuable tool to ensure that they were only granting interviews to journalists who appeared to be acting in good faith and were writing for legitimate outlets. That said, a majority of the scientists who participated in this survey do not regularly engage in vetting their sources. Media training for scientists may help them to learn how to best judge that journalists are acting in good faith and are generally competent before they agree to interviews, in addition to appreciating that they may have little control over the story after the interview.

## METHODOLOGY

This survey was conducted between April 30 and May 21, 2024, among 162 journalists and 392 scientists who have used SciLine's expert matching service. Participants were invited to the study via email out of a complete list of journalists and scientists who have used SciLine's expert matching service at least once in the past 6 years. The response rate was 14% for the journalist sample and 11% for the scientist sample. Survey funding was provided by SciLine and the American Association for the Advancement of Science (AAAS).

While our scientist sample skewed slightly male (56.0%), our sample of journalists was strongly female (72.0%). The majority of both scientists and journalists who participated in the survey identified as white (scientists 82.4%; journalists 81.1%) and non-Hispanic (scientists 95.9%; journalists 93.2%). All of the scientists who participated in the survey had a graduate or professional degree, and so did a majority of journalists (58.3%). A strong majority of both journalists (79.4%) and scientists (81.2%) identified as either politically left or left-leaning. Our sample of scientists skewed slightly older ( $m = 56.8$  years old) than our sample of journalists ( $m = 43.5$  years old).

Each question was asked as a 5-point Likert-style scale (e.g., strongly agree to strongly disagree), a 0-to-100 semantic differential scale (e.g., honest to dishonest), or a categorical response (e.g., male, female, non-binary/third gender). The specific question wordings are featured in each visual.

## Participant Demographics

	Journalists (n = 161)	Scientists (n = 392)
<b>Gender</b>		
Female	72.0%	42.5%
Male	23.5%	56.0%
Non-binary/third gender/self-describe	3.0%	0.3%
Prefer not to say	1.5%	1.2%
<b>Race</b>		
American Indian	0.8%	0.3%
Asian	6.1%	6.3%
Black	1.5%	0.6%
White	81.1%	82.4%
Other	3.8%	4.4%
More than one race	4.4%	3.2%
Prefer not to say	2.3%	2.8%
<b>Hispanic</b>		
Yes	6.8%	4.1%
No	93.2%	95.9%
<b>Education</b>		
Graduate or professional degree	58.3%	100.0%
Bachelor's degree	39.4%	0.0%
Some college	2.3%	0.0%
<b>Political Orientation</b>		
Left/leaning left	79.4%	81.2%
Center	9.9%	15.0%
Right/leaning right	0.8%	1.9%
Don't know/non-political	9.9%	1.9%
<b>Age</b>		
Mean	43.5	56.8
Median	39	55

### Data from the Center for Media Engagement



## ENDNOTES

- <sup>1</sup> Dunwoody, S. (2021). Science journalism: Prospects in the digital age. In *Routledge handbook of public communication of science and technology* (pp. 14–32). Routledge.
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- <sup>3</sup> Schäfer, M. S. (2017). How changing media structures are affecting science news coverage. In Kathleen Hall Jamieson, Dan Kahan, & Dietram A. Scheufele (Eds.), *The Oxford handbook of the science of science communication* (Vol. 51, pp. 51–57). Oxford University Press New York.
- <sup>4</sup> Dudo, A. (2015). Scientists, the Media, and the Public Communication of Science. *Sociology Compass*, 9(9), 761–775.
- <sup>5</sup> Boykoff, M. T., & Yulsman, T. (2013). Political economy, media, and climate change: Sinews of modern life. *WIREs Climate Change*, 4(5), 359–371. <https://doi.org/10.1002/wcc.233>; Russell, A., Kangas, J., Kunelius, R., & Painter, J. (2023). Niche climate news sites and the changing context of covering catastrophe. *Journalism*, 24(7), 1387–1405. <https://doi.org/10.1177/14648849221113119>
- <sup>6</sup> Anderson, J., Dudo, A., and Terrell, R. (June, 2023). The state of science reporting in today's digital media landscape: Interviews with scientists who use SciLine's service. *Center for Media Engagement*. <https://mediaengagement.org/research/state-of-science-reporting-interviews-with-scientists>
- <sup>7</sup> Anderson, J., & Dudo, A. (2023). A view from the trenches: Interviews with journalists about reporting science news. *Science Communication*, 45(1), 39-64.