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INVITED PAPER

# Scientists No Longer Find Twitter Professionally Useful, and Have Switched to Bluesky

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**Synopsis** Social media has become widely used by the scientific community for a variety of professional uses, including networking and public outreach. For the past decade, Twitter has been a primary home of scientists on social media. In recent years, new leadership at Twitter has made substantive changes that have resulted in increases in the prevalence of pseudoscience, conspiracy theory, and harassment on the platform, causing many scientists to seek alternatives. Bluesky has been suggested as a good alternative to Twitter, but the phenomenon of academics switching social media platforms has not previously been studied. Here we report on the results of a survey distributed to scientists on Twitter and Bluesky ($n = 813$). Results overwhelmingly confirm that changes to Twitter have made the social media platform no longer professionally useful or pleasant, and that many scientists have abandoned it in favor of Bluesky. Results show that for every reported professional benefit that scientists once gained from Twitter, scientists can now gain that benefit more effectively on Bluesky than on Twitter.

## Introduction

Social media tools can benefit scientific researchers in many ways, including professional networking with colleagues they might not otherwise meet, keeping informed about new developments in their field, and public science outreach (Collins et al. 2016; Dermentzi et al 2016). For approximately the past decade, one of the most professionally useful (Shiffman 2018) and widely used (Collins et al. 2016) social media tools was Twitter (now known as "X," but referred to herein as Twitter for convenience and ease of understanding following Shiffman 2025). "Science Twitter" was a vibrant and diverse social space for scientific networking and knowledge exchange (Shiffman 2022).

However, the social media landscape often changes (Robards 2012; Thaler et al. 2012), and Twitter was no exception. Under new ownership, changes to Twitter's moderation policy and algorithm have allowed pseudoscience, conspiracy theory, and harassment (especially of academics who are not white men, Levy 2023) to flourish (Kupferschmidt 2022). These issues have previously led author DS (David Shiffman) to recommend that scientists abandon Twitter and explore other platforms (Shiffman 2025).

In the past year, a new social media platform called Bluesky has expanded in popularity among academics (Kupferschmidt 2024; Shiffman 2024), and accordingly, Bluesky has been recommended as an alternative to Twitter in a recent guide by author DS (Shiffman 2025). A recent non-scientific poll conducted by Nature News (Biever 2025) found that many scientific researchers are switching from Twitter to Bluesky for a variety of reasons. Though other social media platforms (e.g., Threads, Mastodon) exist and have been billed as Twitter alternatives, reporting has suggested that the academic community has mostly relocated to Bluesky, not to these sites.

Here we report on the results of a scientific survey distributed to scientists on Twitter and on Bluesky. Overall, we aim to better understand how scientists and science educators are currently using these platforms for professional purposes, how their

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choices over platform use are or have changed, and why.

## Methods

Professional scientists and science educators who use Twitter and/or Bluesky for professional purposes were recruited to complete an online survey. Posts advertising, the survey were shared on both platforms through the accounts of author DS, who is one of the most followed scientists on both Twitter and Bluesky, and is connected through those platforms to many other highly followed professional science accounts who also helped to share the survey link. The survey link was shared on both platforms for a period of 1-month and was regularly re-posted during that time. It was widely shared by scientists on both platforms to their audiences, which include other scientists.

Participants who started the survey were shown an informed consent script before being asked to confirm that they were a member of the target population for the study. Namely, that they were over (a) 18 years of age; (b) are a professional scientist, science communicator, or science educator; (c) previously used Twitter and now use Bluesky either in addition to or instead of Twitter, and (d) used these platforms at least in part for professional purposes related to their scientific work (e.g., public outreach, networking, learning about their field). Those that confirmed that they met the above criteria were directed to complete the remainder of the survey (final $n = 813$).

The survey used a combination of open-response and Likert-type scales to measure attitudes toward and experiences with each platform for professional purposes, including the following:

- When they joined Twitter their follower number and total number of Tweets
- When they signed up for Bluesky, their use of that platform relative to Twitter
- How they heard about Bluesky, their motivations for joining, their follower number and total number of posts
- What professional tasks they have used Twitter for and whether the platform is more or less useful for each of those tasks now relative to 2021
- What professional tasks they use Bluesky for and whether it is relatively more or less useful for those tasks than present day Twitter
- Their rating of several Likert items regarding their motivations for using and experiences of each platform

Finally, participants were asked to complete questions regarding their career stage, work sector, and area of study, as well as demographic items. The median completion time for the survey was 10.4 min. Study methods were approved by the Institutional Review Board at the University of Miami (protocol number 20241299).

## Results

See Supplementary Materials for a discussion of the demographics of respondents, who represent academic and non-academic scientists, educators, and scientific institutions with a wide range of primary disciplines of expertise and a wide range of professional experience.

### Twitter Use

A total of 780 respondents reported when they joined Twitter, with a plurality joining in 2009 ($n = 81$, 10%) and 5%–9% of respondents joining every year after that until 2021 when new signups dramatically declined (SUPPLEMENTARY MATERIALS Fig. S1). Note that 9 respondents (1.1%) reported joining Twitter before Twitter existed and have been excluded from Fig. S1.

Respondents reported a wide range of maximum Twitter followers they had during their lifetime usage of Twitter, ranging from 0 to a quarter of a million (skewed by 1 respondent with an extremely high follower count) (median = 1,000, IQR 400–3,000). The total number of tweets a user posted during lifetime Twitter usage also varied widely, from 0 to one million (median = 1,845.5, IQR 200–10,000).

Respondents reported having used Twitter for a variety of professional purposes, including learning about new developments in their field (92.3% of respondents, $n = 751$), professional networking to meet others in their field (85.5% of respondents, $n = 696$), and public outreach (77.3% of respondents, $n = 629$). A variety of other professional uses of Twitter were also shared, including advertising jobs, promoting their own work, asking colleagues for help with quick technical questions, and discussing politics of interest to their discipline (e.g., labor rules at universities, climate change policies, etc.)

### Decline in professional utility of Twitter

Respondents who reported having used Twitter for professional purposes were asked to rate whether the platform is more or less useful now for that use, compared to before it changed ownership. Less than 5% of participants who had not used Twitter prior to 2021 (n = 38) were excluded from this analysis. The following percentages represent proportions of those that answered each item, as only participants who said they had used Twitter for each purpose were shown the associated scale to assess any changes. For each of these profes-

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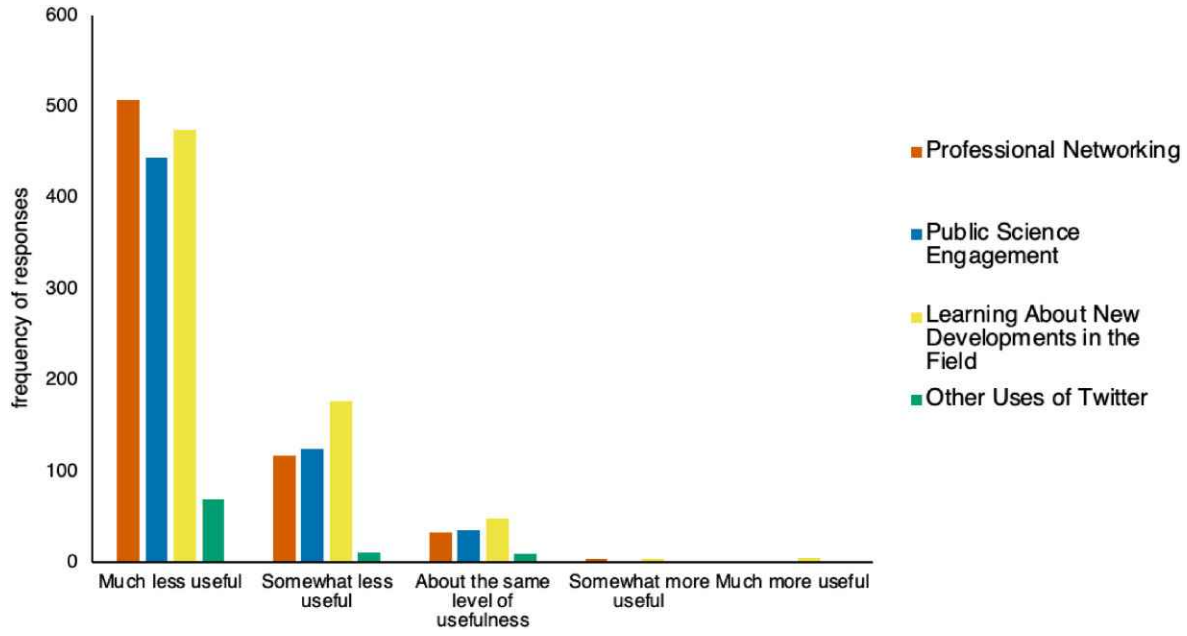


**Fig. 1** Respondents assessment of Twitter relative change in usefulness for professional purposes since 2021.

sional uses, a majority of these respondents reported that in the last few years, Twitter has become "much less useful" for each of these professional tasks (FIG. 1). Three-quarters (76.4%, $n = 507$) reported that Twitter has become much less useful for professional networking, 73.0% report that Twitter has become much less useful for public science engagement ($n = 444$), and 66.9% reported that Twitter has become much less useful for learning about new developments in their field ($n = 475$). Only single digit counts of respondents reported that Twitter has improved (become either somewhat or much more useful) in any of these categories.

Nearly half of respondents say they still have a Twitter account, but use it much less frequently or not at all ($n = 391$ respondents, 48.0%,) and 325 ($n = 39.9\%$) deleted their Twitter and now only use Bluesky. Only 11.4% ($n = 93$) reported that they were still actively using Twitter. In open responses, participants most frequently noted that changes to site management and algorithmic feeds had increased the amount of content they were uninterested in or did not want to see relative to content from accounts they followed ($n = 144$, 17.7% of participants). For instance, one respondent noted, "that the information showing on my timeline in X was usually irrelevant, or filled with ads. It became much more difficult to see content from the network of people I follow and engage with." In addition to ads, participants also noted an increase in spam, porn, bots, and promoted posts from users who had paid for "verification," many of whom posted extremist content.

In addition to a shifting ratio of unwanted to wanted content, participants also noted a rise of dis- and misinformation on the platform ($n = 31$, 3.8%) and an overall decline in both the quality and quantity of engagement ($n = 48$, 5.9%). Others noted that the experience of being on the site was increasingly "unpleasant," "negative," and even "hostile" ($n = 53$, 6.5%). A few stated that the combination of these shifts had made the site feel explicitly "anti-science." Several others noted a concern for reputational risks of being on the platform ("I very quickly saw material that I did not want my posts to be posted next to or be associated with") and an ethical discomfort with being associated with the platform ("This is not a place that we should in good conscience be spending our time as scientists.").

## What attracted respondents to Bluesky, and how did they hear about it?

Respondents reported hearing about Bluesky from a variety of sources, including news articles (7.1%), a recommendation from a colleague or friend (47.1%), or seeing others discuss it on other platforms (61.2%). Responses indicate that a variety of purported benefits contributed to decisions to try Bluesky including a welcoming community, more moderation tools for resolving harassment, and greater engagement with followers (Fig. 2).

A majority of respondents (59.7%, $n = 486$) reported that they were both drawn to Bluesky's purported benefits and were actively seeking to avoid Twitter's new drawbacks. Nearly a third (31.8%, $n = 259$) reported that their decision to try another platform was primarily driven by trying to avoid features or experiences on

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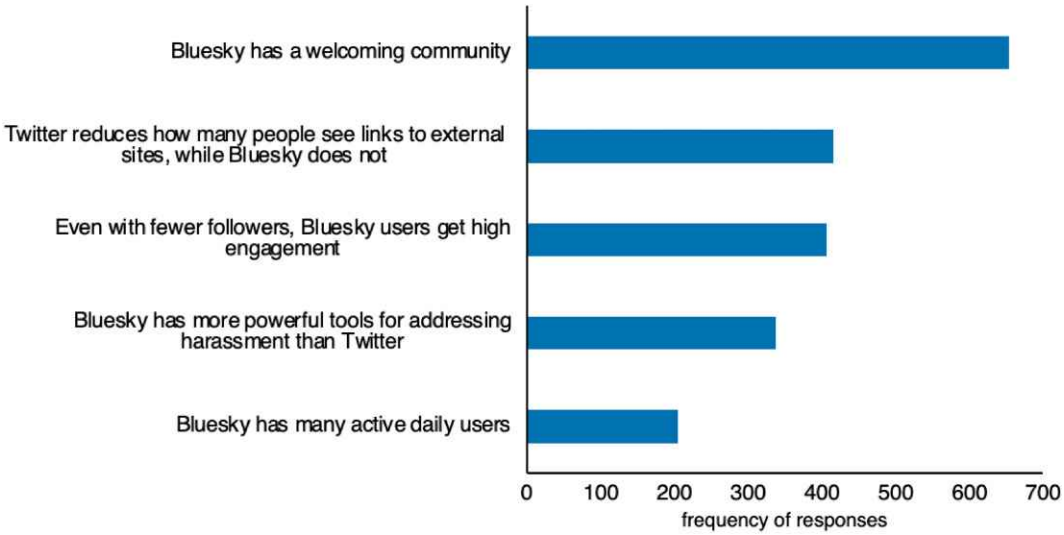


**Fig. 2** Number of respondents who said each purported benefit of Bluesky was important in their decision to try the platform.

Twitter. Only 4.3% ($n = 35$) reported that they were drawn to Bluesky's reported benefits but did not consider Twitter's declines when choosing when to sign up.

In addition to selecting from a provided list, respondents were permitted to share their own reasons for joining Bluesky. The single largest reason provided was related to social network traits and norms—they had been invited or received a recommendation from someone in the science community or had simply noted that the community had largely migrated to the new platform and decided to follow ($n = 354$, 43.5% of participants) (e.g., "academics are there now en masse," "The science community was moving there," and "I missed science Twitter and Bluesky seemed to be where other scientists were moving." Others cited the declining usefulness of Twitter directly as their reason for trying the new platform ($n = 229$, 28.2%). As one participant pithily put it, "(1) Twitter started to suck and (2) all the cool people were moving to Bluesky."

Many focused on the rise of extremism on Twitter in recent years (e.g., "I hate Nazis," "Bluesky's leadership has not posted antisemitic rants [unlike Twitter's, ]" and "Twitter is fascist now.") ($n = 93$, 11.4%). Still others ($n = 244$, 30.0%) noted a strong personal animus towards Elon Musk, the new owner of Twitter (e.g., "Elon Musk is a jerk," "I don't want to support Elon because he sucks," and "Bluesky is not owned by Elon Musk.").

Some referenced specific features offered by Bluesky and not by Twitter (e.g., "Open source API [Application Programming Interface, back-end software access] that allows me to write my own tools to automate various tasks," "ability to avoid prioritization algorithms," and "greater control over the posts that I see on my feed.") or features perceived to be improved on by Bluesky, particularly moderation and blocking tools ($n = 87$, 10.7%). Despite these differences and improvements, many participants noted that the similarity in format and user interface were a draw for them ($n = 108$, 12.8%). In some cases, it was noted that this similarity "made it easier to transition," was "familiar and comfortable," and evoked the "Old Twitter."

Several participants explicitly noted that they were seeking a replacement for or alternative to Twitter ($n = 63$, 7.7%) and/or stated that their reason for trying Bluesky was that it was "Not Twitter" or allowed them to "escape Twitter" ($n = 48$, 5.9%). A few noted that they "genuinely missed the science engagement I used to have on Twitter."

## Bluesky Use

At the time of the survey, the number of followers respondents reported having on Bluesky ranged from 0 to 80,000 (median = 650, IQR 184–1,733). The number of posts they reported having made ranged from 0 to 61,000 (median = 75, IQR 15–328). Of the 791 respondents who reported when they joined Bluesky, 48.4% reported joining in 2023 and 46.5% in 2024 (Fig. S2). The month with the single largest spike in membership was November 2024, after the 2024 US Presidential election. 699 respondents also reported the estimated date they started using Bluesky more than Twitter. Here, only 22.0% said they started using Bluesky more in 2023, while 74.5% said they started using Bluesky more in 2024. Again, the largest spike occurred in November 2024 when 29.61% of the sample reported moving their activity primarily to the new platform (Fig. S3).

Users reported a similar range of professional uses for Bluesky as were reported for Twitter, including learning about new developments in their field (94.5%, $n = 769$),

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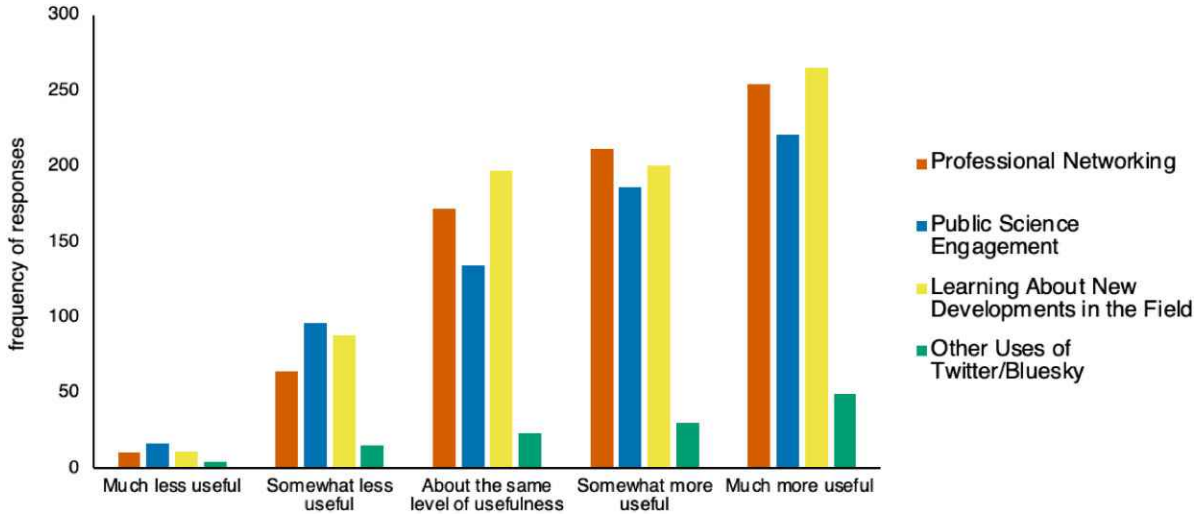


**Fig. 3** Respondents assessment of Bluesky's usefulness for each professional task relative to Twitter.

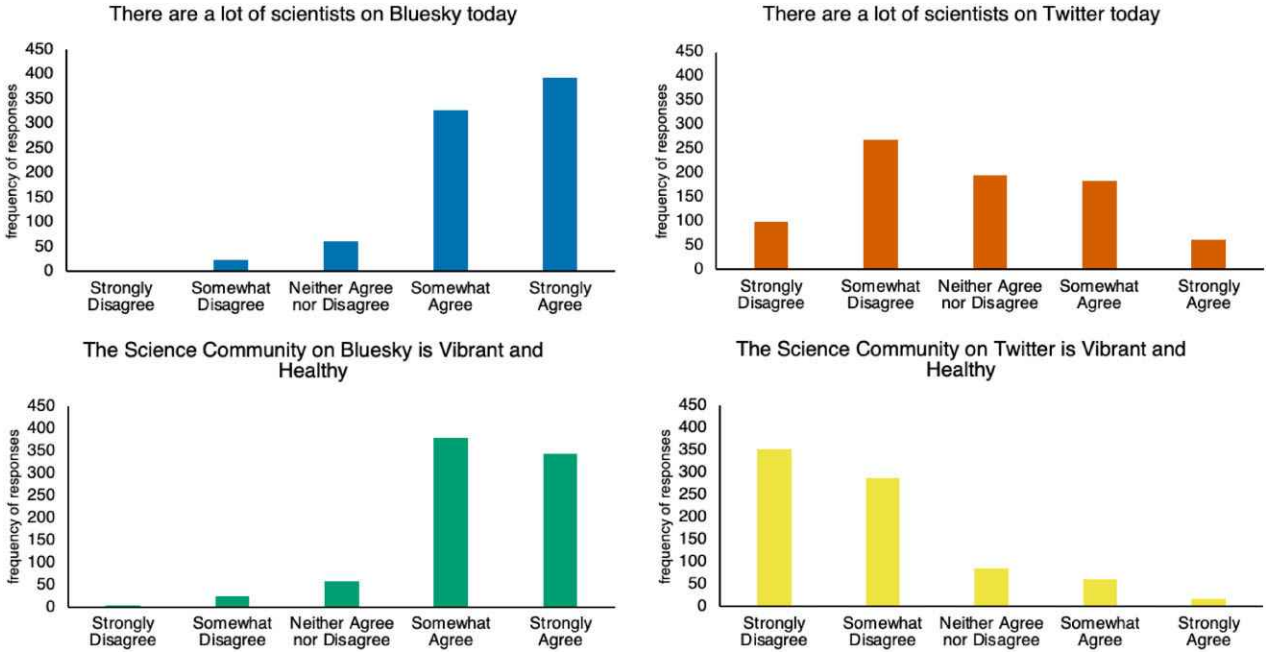


**Fig. 4** Relative agreement on a Likert scale with statements about the communities on Bluesky and Twitter.

professional networking (87.8%, $n = 715$), and public science engagement (81.1%, $n = 660$). In open responses, other reported uses of Bluesky included advertising and searching for job opportunities, marketing books, learning how to support diverse communities within STEM, "watercooler type socializing," and sharing updates from scientific conferences, among others.

## Professional utility of Bluesky vs. Twitter

Of those that reported using Bluesky for these tasks, a majority indicated that the new platform was somewhat or much more useful for each task than Twitter at the time of the survey (Fig. 3).

A total 87% of respondents ($n = 713$) strongly agreed that their personal enjoyment of Twitter has decreased since 2021. A clear majority of respondents report that social media use has helped their career, with 316 respondents (38.8%) strongly agreeing and 318 respondents ($n = 39.1\%$) somewhat agreeing, and only 16 (2.0%) strongly disagreeing. An overwhelming majority of respondents believe that Bluesky has a vibrant and healthy online science community, and that Twitter no longer does (Fig. 4).

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## Discussion

Responses show that across a wide variety of users, scientists and science educators no longer find Twitter to be a professionally useful or enjoyable service. Our sample included participants from a wide range of scientific disciplines and career stages, included respondents all over the world, and represented a range from extremely casual social media users to power users. For every professional use of social media, respondents overwhelmingly reported that Twitter is not as useful as it used to be, and that Bluesky is now more useful than Twitter.

Migrations from one social media platform to another are not uncommon (Robards 2012; Hou & Shiau 2020) and people tend to utilize multiple platforms simultaneously to fulfill different purposes and needs (Tandoc et al. 2019). In many ways, this migration is reflective of the wider literature on social media adoption and migration. Namely, that decisions to leave a platform are driven by a combination of "push and pull"—people are both drawn to new platforms and driven away from old platforms for a variety of reasons—including the perceived usefulness, peer influences, ease of use, and compatibility with existing values (Osorio 2015; Jeong et al. 2024).

However, this relatively rapid migration from Twitter by scientists feels notable for several reasons. First, we consider these results in the context of the importance of Twitter for scientists over the prior decade. Researchers have noted that scientists have used the platform for a variety of reasons relevant to their careers including professional connections, learning and information seeking, and social capital development (Dermentzi et al. 2016; Shiffman 2018; Murthy et al., 2014), as well as to facilitate policy change and important public conversations at the public policy science interface (Cote & Darling 2018; Walter et al. 2019). Respondents in our sample seemed to lament the decline of Twitter's utility for these purposes, reflecting a sense of loss and a strong desire to find a workable replacement.

The other notable aspect of this migration is the degree to which it appears to be driven both by long-term shifts in platform usefulness and sudden "disturbances" such as events in the news (i.e., the 2024 US presidential election). Once a social media platform has been adopted and usage is habitual, changes to those habits can be difficult to make. Sudden disturbances to a platform's services have been shown to drive decisions to make such changes (Lu & Gallupe, 2016). Smaller scale versions of this have been documented in other cases such as shifts in user behavior on Reddit after changes to the moderation policy and attitudes toward Facebook usage after the Cambridge Analytica scandal (Newell et al. 2016; Brown 2020). Both the added friction in using the platform from management decisions (e.g., moderation and algorithm changes) and the decreasing compatibility in values between the scientific community and that of the platform, seem to be embodied in the new owner Elon Musk, who was mentioned as a central figure in participant's decision to seek out an alternative.

In 2023, researchers looking at migration patterns from Twitter found that while Bluesky had emerged as a genuine competitor, the public had not coalesced around a single alternative platform and continued activity on Twitter served as an enduring "pull" to remain there (Jeong et al. 2024). Our findings indicate that at this point, some of that attraction has decreased at least within the scientific community with nearly 40% having deleted their Twitter accounts and another half primarily now using Bluesky. Bluesky seems to have reached a critical mass for this particular online community (see studies on network growth and critical mass in Backstrom 2006; Fiesler & Dym 2020). The format and user experience similarities between Twitter and Bluesky appear to have reduced some of the potential transaction costs associated with migration to a new platform, and tools available on the new site to find old and new contacts (e.g., lists, starter packs) have seemed to further reduce friction (Fiesler & Dym 2020).

These findings should be considered within the constraints of certain limitations. First, our use of purposive sampling was limited to a snapshot of Twitter and Bluesky networks. Users who left Twitter but either joined another online platform or stopped using social media all together would not be captured using this method. Our findings cannot account for the full range of user behaviors in response to changes in Twitter management and moderation, and further specifically targeted users who have made the switch the Bluesky. Thus, findings are not meant to capture a complete picture of network migration, but rather provide a more in-depth look at decisions to migrate (or not) to what had been identified elsewhere as a popular alternative within the academic community. Relatedly, purposive sampling using online platforms can rely on the snowballing effects of reach within a given network (Chan 2020; Sibona et al. 2020). This can in some cases limit reach, for better or worse, to those endogenous to a particular community. In this case, the initial sampling seeds were through author DS online accounts. Potential biases of this approach are tempered by the authors central position within the Science Twitter and Science Bluesky communities which elicited many re-

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shares from other high-follower accounts on both sites. Future research may helpfully triangulate on the patterns identified in this study using other complementary methods, such as large-scale mathematical modeling of user migration (e.g., Quelle et al. 2025).

One final potential point of caution with Bluesky is that Science Twitter was especially well-known for its demographic diversity, spawning movements like Black Birders Week (Ortega 2021), Black in Neuroscience (Murray et al. 2021), Queer in STEM (Lopez and Roca 2023) and Minorities in Shark Sciences (Graham et al. 2022). It is currently unknown if Bluesky has attracted the same level of diversity, and our survey did not capture this phenomenon one way or the other. An explicit follow-up survey is recommended, and if respondents feel that Bluesky is not welcoming for non-white scientists, solutions should be proposed.

In conclusion, these findings align with recent news reporting (e.g., Kupferschmidt 2022, 2024) and a non-scientific poll conducted by Nature (Biever 2025) identifying this migration. In the context of the wider literature on social media migration, our findings suggest that this migration is unlikely to revert to the prior status quo in which the science community primarily engaged on Twitter. Findings further support the recommendations in Shiffman (2025) that for scientists and science communicators, Twitter is no longer the place to be for professional purposes, and Bluesky should be considered instead.

## Author contributions

Author D.S. conceived this project, and author J.W. administered the survey and created figures. Both authors contributed equally to data analysis and writeup.

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## Supplementary Data

Supplementary data available at *ICB* online.

## Conflict of interest

The authors have no conflict of interest to declare.

## Data availability statement

The data underlying this article cannot be shared publicly due to privacy concerns, but redacted subsets of data will be shared upon reasonable request to the corresponding author.

## References

Backstrom L, Huttenlocher D, Kleinberg J, Lan X. 2006. Group formation in large social networks: membership, growth, and evolution. In Proceedings of the 12th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining 44–54. https://doi.org/10.1145/1150402.1150412.

Biever C. 2025. Bluesky's science takeover: 70% of Nature poll respondents use platform. Nature.

Brown AJ. 2020. "Should I stay or should I leave?": exploring (dis)continued facebook use after the cambridge analytica scandal. Soc Media Soc 6:2056305120913884. https://doi.org/10.1177/2056305120913884.

Chan JT. 2020. Snowball sampling and sample selection in a social network. In: The Econometrics of Networks, Emerald Publishing Limited, Leeds, UK (p. 61–80.

Collins K, Shiffman D, Rock J. 2016. How are scientists using social media in the workplace?. PLoS One 11:e0162680.

Côté IM, Darling ES. 2018. Scientists on twitter: preaching to the choir or singing from the rooftops? FACETS 3:682–94. https://doi.org/10.1139/facets-2018-0002.

Dermentzi E, Papagiannidis S, Osorio Toro C, Yannopoulou N. 2016. Academic engagement: differences between intention to adopt social networking sites and other online technologies. Comput Hum Behav 61:321–32. https://doi.org/10.1016/j.chb.2016.03.019.

Fiesler C, Dym B. 2020. Moving across lands: online platform migration in fandom communities. Proc. ACM Hum.-Comput. Interact. 4:1–25. https://doi.org/10.1145/3392847.

Graham J, Cáceres C, de Azevedo Menna DS. (Eds.). 2022. Minorities in shark sciences: diverse voices in shark research. Boca Raton, USA, CRC Press.

Hou AC, Shiau W-L. 2020. Understanding facebook to instagram migration: a push-pull migration model perspective. Inf Technol People 33:272–95.

Jeong U, Sheth P, Tahir A, Alatawi F, Bernard HR, Liu H. 2024. Exploring platform migration patterns between twitter and mastodon: a user behavior study. ICWSM 18:738–50.

Kupferschmidt K. 2022. As musk reshapes twitter, academics ponder taking flight. Science 378:583–4.

Kupferschmidt K. 2024. Like 'old twitter': the scientific community finds a new home on bluesky. Science 386:950–6

Levy A. 2023. Trolled in science: hundreds of hateful comments in a single day. Nature.

Lopez L, Roca AI. 2023. Practice spotlight: using queer in STEM and related hashtags to promote your science communication. In: Queering science communication, Bristol University Press, Bristok, UK. 101–3.

Lu Y, Gallupe RB. 2016. Post-adoption of social network sites: a literature review and a process framework.

Murray DS, Richardson L, Tesfaye R, Nadin D, Kelly C, Greenwood P. 2021. Black in neuro, beyond one week. J. Neurosci. 41:2314–7.

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Murthy D, Hastings CM, Mawrie SA. 2014. The use of social media to foster trust, mentorship, and collaboration in scientific organizations. Bull Sci Technol Soc 34:170–82. https://doi.org/10.1177/0270467615582196.

Newell E, Jurgens D, Saleem H, Vala H, Sassine J, Armstrong C, Ruths D. 2016. User migration in online social networks: a case study on reddit during a period of community unrest. ICWSM 10:279–88. https://doi.org/10.1609/icwsm.v10i1.14750.

Ortega RP. 2021. Black scientists gather to form communities and boost diversity in science. Nat Med 27:756–8.

Osorio Toro CA. 2015. In: Joining, participating in and withdrawing from a social networking site, Newcastle University, Newcastle, UK.

Quelle D, Denker F, Garg P, Bovet A. 2025. Why academics are leaving twitter for bluesky. preprint arXiv:2505.24801.

Robards B. 2012. Leaving myspace, joining facebook: 'growing up' on social network sites. Continuum (N Y) 26:385–98. https://doi.org/10.1080/10304312.2012.665836.

Shiffman DS. 2018. Social media for fisheries science and management professionals: how to use it and why you should. Fisheries 43:123–9.

Shiffman DS. 2022. What we lose if we lose science twitter. Am Sci 110:378–81

Shiffman DS. 2024. The burgeoning bluesky science community. Am Sci

Shiffman DS. 2025. Social media for fisheries science and management professionals: how to use bluesky and instagram, and why you should! Fisheries.

Sibona C, Walczak S, White Baker E. 2020. A guide for purposive sampling on twitter. Commun Assoc Inf Syst 46:22.

Tandoc EC, Jr., Lou C, Min VLH. 2019. Platform-swinging in a poly-social-media context: how and why users navigate multiple social media platforms. J Comput-Media Commun 24:21–35. https://doi.org/10.1093/jcmc/zmy022.

Thaler AD, Zelnio KA, Freitag A, MacPherson R, Shiffman D, Bik H, McClain C. 2012. Digital environmentalism: tools and strategies for the evolving online ecosystem. Environ Leadersh: Ref Handb 39:364–73.

Walter S, Lörcher I, Brüggemann M. 2019. Scientific networks on twitter: analyzing scientists' interactions in the climate change debate. Public Underst Sci 28:696–712. https://doi.org/10.1177/0963662519844131.

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SUPPLEMENTARY MATERIALS for

“Scientists no longer find Twitter professionally useful, and have switched to Bluesky”

**DEMOGRAPHICS of survey respondents**

| | **n** | **% of total** |
|---|---|---|
| **Career stage** | | |
| I am a graduate student currently pursuing a masters degree or equivalent. | 12 | 1.50 |
| I am a graduate student currently pursuing a doctoral degree or equivalent. | 98 | 12.00 |
| I have less than 5 years of professional experience since my last degree. | 140 | 17.20 |
| I have between 5 and 10 years professional experience since my last degree. | 131 | 16.10 |
| I have more than 10 years professional experience since my last degree. | 409 | 50.20 |
| **Area of employment** | | |
| Academia (university) | 518 | 63.60 |
| State or local government | 22 | 2.70 |

| | | |
|---|---|---|
| National or federal government | 53 | 6.50 |
| International governance | 4 | 0.50 |
| Non-profit or NGO | 72 | 8.80 |
| Industry | 47 | 5.80 |
| Consulting | 31 | 3.80 |
| Other | 65 | 8.00 |
| **Area of study** | | |
| Human biology and/or medice | 124 | 15.20 |
| Ecology, biology and/or environmental science | 325 | 39.90 |
| Physics | 25 | 3.10 |
| Chemistry | 45 | 5.50 |
| Astronomy | 33 | 4.10 |
| Anthropology and/or archeology | 22 | 2.70 |
| Economics | 5 | 0.60 |
| Geography | 9 | 1.10 |
| Political science | 10 | 1.20 |
| Psychology | 30 | 3.70 |
| Sociology | 6 | 0.70 |

| | | |
|---|---|---|
| Geology or earth science | 57 | 7.00 |
| Other | 122 | 15.00 |
| **Gender** | | |
| Male | 359 | 44.10 |
| Female | 390 | 47.90 |
| Non-binary / third gender | 48 | 5.90 |
| Prefer to self-describe | 5 | 0.60 |
| Prefer not to say | 7 | 0.90 |
| **Highest level of education** | | |
| Some high school or less | 1 | 0.10 |
| High school diploma or GED | 1 | 0.10 |
| Some college, but no degree | 4 | 0.50 |
| Associates or technical degree | 1 | 0.10 |
| Bachelor’s degree | 89 | 10.90 |
| Graduate or professional degree including: MA, MS, MBA, JD, MD, DDS | 169 | 20.80 |
| PhD, DPhil or equivalent | 543 | 66.70 |
| Prefer not to say | 1 | 0.10 |

| | | |
|---|---|---|
| **Age** | | |
| 18-24 years old | 22 | 2.70 |
| 25-34 years old | 187 | 23.90 |
| 35-44 years old | 246 | 30.20 |
| 45-54 years old | 211 | 25.90 |
| 55-64 years old | 99 | 12.20 |
| 65+ years old | 45 | 5.50 |
| **Country of origin*** | | |
| USA | 465 | 57.13 |
| UK | 82 | 10.07 |
| Canada | 62 | 7.62 |
| missing999 | 26 | 3.19 |
| Australia | 25 | 3.07 |
| Germany | 25 | 3.07 |
| France | 15 | 1.84 |
| Spain | 14 | 1.72 |

| | | |
|---|---|---|
| Netherlands | 9 | 1.11 |
| New Zealand | 8 | 0.98 |
| India | 8 | 0.98 |
| Ireland | 7 | 0.86 |
| Portugal | 6 | 0.74 |
| Italy | 5 | 0.61 |
| **Country where respondents primarily work**** | | |
| USA | 482 | 59.21 |
| UK | 75 | 9.21 |
| Canada | 57 | 7.00 |
| Australia | 24 | 2.95 |
| Germany | 24 | 2.95 |
| New Zealand | 13 | 1.60 |
| Spain | 13 | 1.60 |
| France | 12 | 1.47 |
| Netherlands | 10 | 1.23 |
| Switzerland | 10 | 1.23 |
| Norway | 8 | 0.98 |
| Sweden | 7 | 0.86 |

| | | |
|---|---|---|
| Austria | 6 | 0.74 |
| Denmark | 6 | 0.74 |

Note: some percentages do not add up to 100 because of missing data

* countries listed by fewer than 5 people for this category include Aotearoa, Argentina, Austria, Belgium, Brazil, Chile, China, Colombia, Costa Rica, Denmark, Estonia, Finland, Guatemala, Hong Kong, Iceland, Iran, Israel, Jamaica, Malaysia, Mexico, Norway, Peru, Philippines, Poland, Romania, Russia, Scotland, Serbia, South Africa, Sweden, and Switzerland

** countries listed by fewer than 5 people include Aotearoa, Argentina, Azerbaijan, Belgium, Bermuda, China, Colombia, Costa Rica, Finland, Guatemala, Hong Kong, Iceland, Iran, Ireland, Israel, Italy, Japan, New Caledonia, Peru, Poland, Portugal, Romania

63% of survey respondents (*n* = 518) work in academia. Others (though no more than 9% for any one response) report working for a mix of state or local government agencies, Federal science agencies, the nonprofit sector, industry, consulting, museums, or science journalism.

A plurality reported having an area of experience in ecology/biology/environmental science (39.9%, *n* = 325), with 15.2% (*n* = 124) working in human medicine or biology, 7% (*n* = 57) working in geology or Earth Science, 5.5% (*n* = 45 working in Chemistry, 4.1% (*n* = 33) working in Astronomy, 3.7% (*n* = 30) working in psychology and 3.3% (N=25) working in physics. Fifteen percent (*n* = 122) responded “Other”, which included engineering, agricultural technology, atmospheric science, public health, and academic research surrounding science communication). Several “Other” responses referred to interdisciplinary or multidisciplinary science.

A majority of respondents (50.2%, *n* = 409) report that they have more than ten years of professional experience since earning their terminal degree, with nearly even responses (*n* = 131, 140, and 98) for between 5-10 years since earning their terminal degree, less than 5 years experience, or currently pursuing a Ph.D. or equivalent. A majority of respondents have earned a Ph.D. (66.7%, *n* = 543), with others earning another graduate or professional degree (*n* = 169, 20.8%) or a Bachelor's Degree (*n* = 89, 10.9%).

A majority of respondents work in the United States of America (*n* = 465, 57.1%) and the only other countries with more than 50 responses were the United Kingdom (79 responses, 9.7%) and Canada (60 responses, 7.3%). Germany and Australia both had 25 responses (3%). Respondent age was evenly spread, with 30.2% (*n* = 246) reporting an age of between 35 and 44, 25.9% (*n* = 211) reporting an age of 45-54 years old, and 23% (*n* = 187) reporting an age of 25-34. A plurality of respondents (47.9%, *n* = 390) identify as female, and 359 (44.1%) identify as male.48 respondents identified as non-binary (5.9%) and the remainder selected "prefer not to say".

FIGURE S1: When respondents reported joining Twitter, with 9 responses from pre-2006 removed.

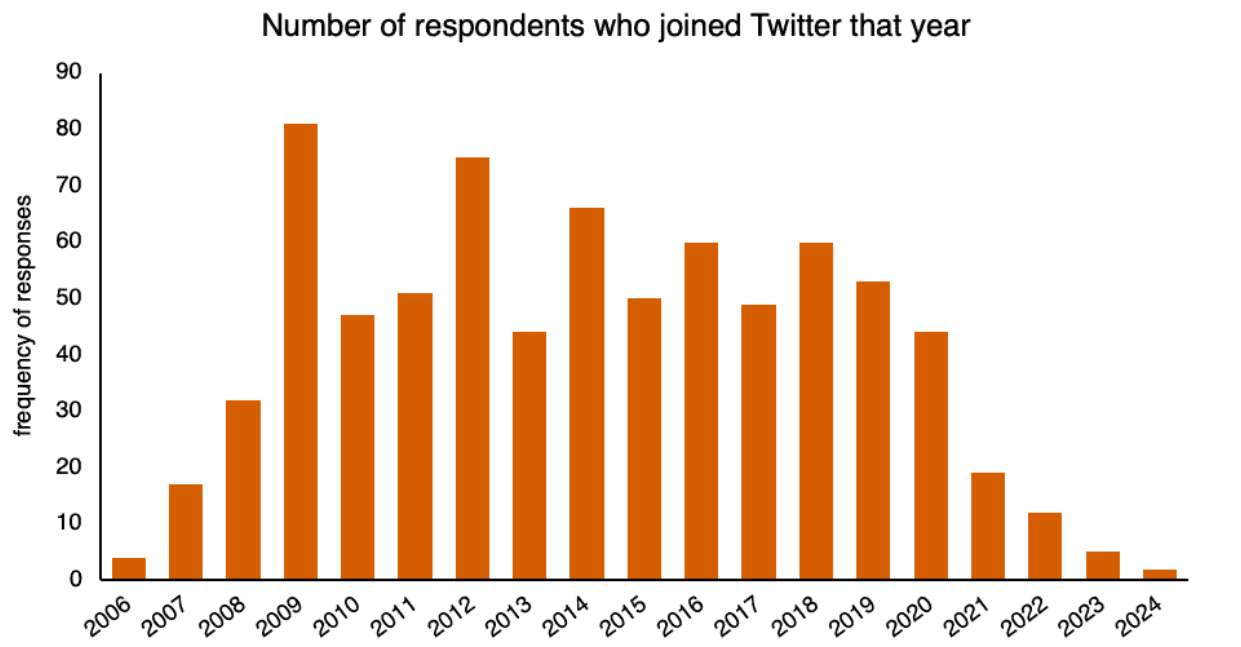

FIGURE S2 When respondents reported joining Bluesky

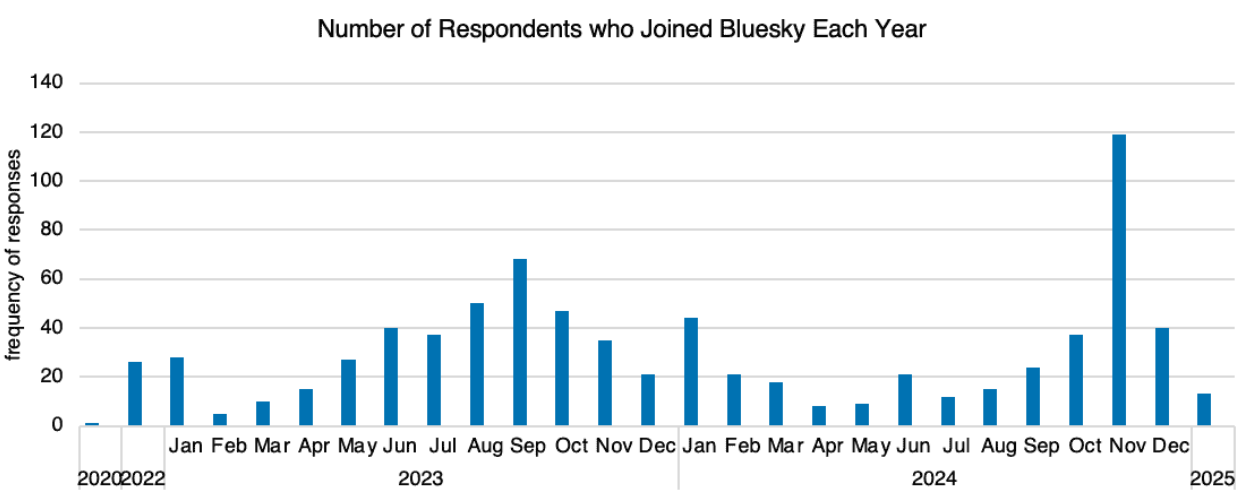


FIGURE S3 When respondents reported switching their activity primarily to Bluesky from Twitter