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LESSONS LEARNED FROM STARTING A SCIENTIFIC EDITING PROGRAM HOW TO WRITE A SCIENCE NEWS RELEASE ANNUAL MEETING REPORTS

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Close-up of swirling clouds around Jupiter's Great Red Spot captured by Voyager 1 spacecraft in 1979. Credit: NASA/JPL



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On the cover: The cover of this issue of Science Editor is a representation of the human microbial ecosystem in hand and machine embroidery on fabric by the artist Rebecca D Harris. "Our bodies are an enormous microbial community with a need to be kept in a healthy balance and humans are therefore referred to as an eco-system. The artist has used this analogy of the body being like a geographical area in this image; the two-dimensional figure is brought to life by drawing her landscape similar to the contour lines found on a map. The trillions of microbes present in the human body is represented by the hand embroidered French knots, the colours of which represent the major groups of microbes present on the skin, and give a sense of the diversity, proportions and distributions of the communities that make our bodies their home." **Credit:** Human microbial ecosystem, artistic representation. Rebecca D Harris. (CC BY 4.0). https://wellcomecollection.org/works/b5cf48v3

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Ten Lessons Learned from Starting a New Scientific Editing Program at a Comprehensive Cancer Center

Deanna E Conners, Jamie L Brooks, Judith G Epstein, and Sandra O Gollnick

Introduction

Science editors play an important role in ensuring the integrity of the scientific literature. While journal editors work with authors to improve the clarity and conciseness of manuscripts during the submission, peer review, and publication stages,1 inclusion of professional editors for authors early on during scholarly knowledge production also can be of high value. Specifically, author editors can provide authors with substantial editing support and customized educational resources that have the potential to improve faculty writing skills, boost their productivity, and enhance efficiency at later publication stages. Reports from various medical institutions on the use of such science editors are generally positive.²⁻⁶ However, shared experiences with these types of integrated editing-educational interventions targeted at faculty are scarce in the literature. Hence, this topic remains an underreported area of science communications that would benefit from further evaluation and discussion among all professionals involved in the knowledge production pipeline.

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This article provides a summary of 10 lessons learned from implementing a formal science editing program at Roswell Park Comprehensive Cancer Center in Buffalo, NY-this information was presented earlier in the form of a poster at the 2023 CSE meeting in Toronto, Canada. Roswell Park, founded in 1898, is a National Cancer Institute (NCI)-designated comprehensive cancer center, with approximately 400 faculty who are engaged in basic science and translational, clinical, and population-based research. The editing program, formally called the Scientific Editing and Research Communications Core (SERCC) Resource, was conceptualized following a needs assessment by the Faculty Development Program and Grants Office in 2020, in which mechanisms to improve writing skills of early career faculty were deemed of high priority. Funding for SERCC is being provided by institutional support. Useful models during the program conceptualization and design phases included the University of Iowa's SERCC and University of Maryland Baltimore's Writing Center. Timewise, the editing program was designed in the spring of 2021 and launched later that summer; now, in the summer of 2023, the program has been in operation for 2 years. The editing program currently operates under Roswell Park's Shared Resources management infrastructure, as an institutionally supported resource, and Roswell Park's SERCC has a website that is publicly available.⁷

The primary activities in SERCC include the editing of manuscripts and grant proposals for early career faculty and EAL (English as an additional language) authors at Roswell Park and the State University of New York at Buffalo, and the development of educational resources. The editing workflow requires a 10-day turnaround time (Figure 1). Educational resources are delivered through comments in edited files, summary reports, educational factsheets distributed through an internal employee internet portal, quarterly program newsletters, and scientific communication seminars. Besides these primary activities, biannual program evaluations are



Figure 1. Workflow for Roswell Park's Scientific Editing and Research Communications Core (SERCC) Resource.

used to review performance and outcome metrics—one important performance benchmark is no unsatisfied clients, and client satisfaction is assessed approximately 1 week after the completion of each project. Outreach and marketing activities to new faculty are conducted under the auspices of the Shared Resource Management Office, through which new faculty are introduced to SERCC during orientation, introductory emails, shared resource newsletters, and a shared resource guidebook. Department chairs also have played a pivotal role in promoting the editing resource to faculty. Lastly, occasional work with graduate students occurs in the form of class lectures and writing workshops; however, SERCC does not edit theses or dissertations.

Lessons Learned

A "lessons learned" approach can serve as a powerful intellectual framework for evaluating programs and sharing best practices. Useful examples of the application of this approach to programs aimed at improving faculty writing skills in medical settings exist.^{3,8,9} Here, we offer 10 lessons learned from the first 2 years of implementation of SERCC at Roswell Park. These lessons are shared with the hope that the information will benefit other science editors who work in collaboration with faculty development and research development programs; equally, we aim to raise awareness about the science editing taking place early on during scholarly knowledge production. These author editors are well positioned to implement author skills building initiatives on topics of importance to journal editors. The 10 lessons learned are as follows:

 Lesson 1: Many faculty were not familiar with professional editing services. In an August 2021 newsletter poll, we asked our readership (which was composed of faculty, postdoctoral fellows, and graduate students) "have you ever used a professional editing service before?" The majority of respondents had not (yes, 13%; no, 87%; n = 15). Personal communications also have corroborated the novelty of professional editing services to our faculty. Thus, our outreach on the educational and career benefits of editing was likely important to the program's success.

- 2. Lesson 2: Editing services have been particularly beneficial for new faculty and EAL authors. This was evidenced by improvements in writing quality over time for repeat clients (as assessed through qualitative observations) and new funding secured by faculty, albeit any editing-related enhancements (e.g., improved language quality) are only one factor that contributes to funding successes.
- 3. Lesson 3: There has been sustained demand for inhouse editorial services (Figure 2). The busiest times have corresponded to 4–6 weeks prior to the grant cycle deadlines at the National Institutes of Health and U.S. Department of Defense. Variation in demand is likely unavoidable throughout the year, and planned limitations on non-editorial work for busy time periods can help programs accommodate these peaks in demand.
- 4. Lesson 4: Plain language summaries are difficult for academic scientists to write. Heavy editing will almost always be needed when working with plain language text. Hence, a good practice is to encourage clients to supply any required plain language summaries upfront with the bulk of their projects so that this type of text is not delegated to work done at the last minute.
- 5. Lesson 5: Building trust upfront is important. Programs need to consider the most suitable ways to build trust with new clients, for example, by offering free sample edits, ensuring the integrity of the edit, supplying edits as recommendations not mandates, maintaining the author's voice, and raising the visibility of editors through seminars and meetings. The most fruitful solutions will likely be context dependent.

FEATURE

CONTINUED



Figure 2. Cumulative number (line) and types (inset) of projects edited by Scientific Editing and Research Communications Core during years 1 and 2. A median of 5 projects were edited each month (range 1-9 projects per month). Data were compiled over the period March 2021 to March 2023, and these data include 7 pilot projects that were edited prior to the official program launch date of June 16, 2023.

- 6. Lesson 6: Variability exists in needs for editing support (copy edits vs. content edits, improvements for clarity and logic). Because of variability in writing quality among faculty, built-in contingency time for each project is helpful. SERCC uses a 10-day turnaround time on all projects greater than 3 pages in length. In a few instances, 10 days was found to be excessive, but the clients were very happy to receive their edits back early; conversely, in a few instances, more than 10 days would have been desirable, and the editing work had to be prioritized to the most salient issues in need of attention. In general, we have found that a consistent 10-day turnaround time is optimal and easy to implement.
- 7. Lesson 7: Educational outreach on common mistakes is an important mechanism for improving writing quality. Outreach can be delivered through various mechanisms, such as Word tips, educational factsheets, and seminars. Tailored educational support is one feature that makes these types of in-house editing programs so worthwhile.
- 8. Lesson 8: Turnaround times are an important barrier to wider use of the editing resource. Rush edits are often desired but unrealistic. Authors in need of rush edits can be referred to external editing services.
- 9. Lesson 9: Grant writing is different from manuscript writing. While new faculty typically excel at the latter, educational and substantial editing support (vs. simple copy editing support) are needed for the former. Thus, the time needed for editing will typically be higher for

grant proposals than manuscripts. Presentation tips for grants can be especially valuable, such as the need to use a good lede and keywords, and ways to improve the significance and novelty statements.

 Lesson 10: Faculty have consistently reported that the editing resource is important to their scholarship (Figure 3). The monitoring of faculty sentiment is important for program planning purposes and ultimately leadership support and program sustainability.

Conclusions

The main takeaways of this reflective analysis are threefold. First, intuitively, there is value in including science editors early on during knowledge production at academic medical institutions. Importantly, these editors can offer authors editing and educational support that would be cost-prohibitive for journals, with long-term benefits in terms of improved writing skills, increased productivity, and downstream publication efficiencies. However, further metric monitoring and program evaluations will be necessary to quantitatively assess the value going forward. We are currently collecting data through client satisfaction surveys and assessing project outcomes (i.e., number of grants funded and manuscripts accepted for publication) to help us better understand the programmatic value of SERCC. In the future, we hope to interview early career and EAL authors who have used the editing services repeatedly to collect self-assessment data on writing quality improvements. Any such links between in-house science editing programs and improvements in writing quality would be important to communicate. Further downstream benefits on aspects like DEI (diversity, equity, and inclusion) efforts and faculty retention are indeed possible (i.e., through successful experiences with grant writing and high-impact publications) but would be very difficult to quantify.



Figure 3. Results from year 1 and 2 client satisfaction surveys (n = 47) to the question "How important is this core resource to your future manuscript and grant proposal writing efforts?". Satisfaction surveys were sent to clients approximately 1 week after their project ends to assess service quality and gather feedback on the program. These surveys were administered via REDCap software. Data were recorded anonymously.

Second, editing support is best delivered through a formal, integrated editing-educational framework, with ample time for commenting and review, through which authors have opportunities to learn from errors and improve their writing skills. While some authors and editors may already view editing as having educational value,^{6,10-12} to truly offer editing services as a meaningful didactical experience at medical institutions, the authors should be made aware upfront that they are expected to show a desire to learn from the edits and corresponding editorial comments. Edits should not be completed at the last minute if possible. Through comments and summary reports, authors can be introduced to reputable style manuals, such as the American Medical Association's AMA Manual of Style and CSE's Scientific Style and Format, so that they become capable of correcting problematic text independently in the future. Additionally, repeat clients should be assessed for improvements in writing quality over the long-term; in our experience, several early career and EAL faculty have achieved such performance improvements, and this represents one of the most rewarding parts of working in SERCC. However, application of appropriate tools and metrics to assess writing quality improvements following the editing intervention would be worthwhile and add necessary rigor to this supposition.

Third, growth in the number of in-house science editing programs, and the sharing of knowledge on existing ones, would be desirable. Given the high potential benefits of in-house science editing, namely, improvements in faculty writing skills and productivity, and enhancements in efficiency at later publication stages, increased availability of these types of programs at academic medical centers is predicted in the future. Notably, with in-house editorial services, controls (e.g., hiring and training of editors, quality assurance processes) can be implemented easily to ensure that the editing work is consistently of high quality, and confidentiality is guaranteed; authors can be referred to external editorial services if they need a rush edit on a manuscript or the program is temporarily exceeding capacity. Future sharing of best practices and data on the educational value and returns on investment for these types of programs would help to advance the field. We encourage authors who are interested in obtaining this type of editorial support to reach out to their institution's faculty development and research development programsinformal editing mechanisms may already exist, and if not, the expression of interest could lead to the development of new editing programs in the future.

Our programmatic success at Roswell Park, as indicated by sustained demand for editing services (Figure 2) and positive faculty sentiment (Figure 3), has been driven largely by the good will of faculty and administrators; core values of excellence, professionalism, and respect; clear and efficient workflow processes; metrics to track performance; and use of the right mix between standardized policies (authors know what to expect) and flexibilities to deal with new situations in a young program. Future plans include expansion of the metrics being monitored to include utilization rates (number of projects edited in relation to the total number submitted during a particular time period) among junior faculty, detailed analyses of turnaround times to find ways to improve efficiency, and wider dissemination of our educational resources.

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- 1. Jakubisin J, Inman KS. The scientific editor: an advocate for transparent research. Sci Ed. 2023;46:11–13.
- 2. Barroga E, Mitoma H. Improving scientific writing skills and publishing capacity by developing university-based editing system and writing programs. J Korean Med Sci. 2019;34:e9.
- Havermahl T, LaPensee E, Williams D, Clauw D, Parker RA, Downey B, Liu J, Myles J. Model for a university-based clinical research development infrastructure. Acad Med. 2015;90: 47–52.
- Clark C, Sullivan B. Evaluating the NIH library editing service: pilot study used to analyze service impact. Sci Technol Libr. 2014;33:351–357.
- Cameron C, Deming SP, Notzon B, Cantor SB, Broglio KR, Pagel W. Scientific writing training for academic physicians of diverse language backgrounds. Acad Med. 2009;84:505–510.
- 6. Stephens PA, Campbell JM. Scientific writing and editing: a new role for the library. Bull Med Libr Assoc. 1995;83:478–482.
- https://www.roswellpark.org/shared-resources/scientific-editingresearch-communications-core
- Childs E, Remein CD, Bhasin RM, Harris AC, Day A, Sullivan LM, Coleman DL, Benjamin EJ. How to launch and continually enhance an effective medical campus faculty development program: steps for implementation and lessons learned. J Healthc Leadersh. 2021;13:147–156.
- 9. Pololi L, Knight S, Dunn K. Facilitating scholarly writing in academic medicine. J Gen Intern Med. 2004;19:64–68.
- 10. Harwood N. 'Teaching the writer to fish so they can fish for the rest of their lives': lecturer, English language tutor, and student views on the educative role of proofreading. Engl Specif Purp. 2022;68:116–130.
- Mišak A, Marušić M, Marušić A. Manuscript editing as a way of teaching academic writing: experience from a small scientific journal. J Second Lang Writ. 2005;14:122–131.
- Wisker G. Articulate academic writing, refereeing, editing and publishing our work in learning, teaching and educational development. Innov Educ Teach Int. 2013;50:344–356.

Managing Publications for Large Scientific Collaborations: Case Study from NASA's OSIRIS-REx Asteroid Sample Return Mission

CWV Wolner, HC Connolly, Jr, and DS Lauretta

Large-scale collaborative scientific endeavors, such as space missions and Earth observatories, typically have a press office that strategizes and coordinates communication with the public. The same kind of internal coordination is not necessarily applied to communication with the scientific community-that is, via scholarly publications-although peer review and journal production provide external quality control. Issues that sometimes plague publications from large, complex team efforts-such as error propagation, duplication, unaddressed contradictions, and scooping or stove-piping of results-could be mitigated by internal review of manuscripts, and a strategic approach could optimize the impact of the published papers. A principal investigator (PI) or project lead may be able to provide the necessary internal perspective, but they are likely to be burdened by competing demands.

Here we describe how NASA'S OSIRIS-REx mission approached this problem and what we have learned from managing manuscripts produced by the scientists and engineers of varying priorities, specialties, geographic locations, and career stages that compose the mission team.

OSIRIS-REx (which stands for Origins, Spectral Interpretation, Resource Identification, and Security–Regolith Explorer¹) is the first U.S. mission to sample an asteroid.^{2,3}

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The spacecraft, equipped with a sophisticated payload of cameras, spectrometers, and a laser altimeter, arrived at its target, the near-Earth asteroid Bennu, in 2018 (Figure 1). It spent the next 3 years observing Bennu from close range. This period involved a series of intense operational and analytical cadences to characterize the landscape, select a viable touchdown site, and safely acquire a sample of loose rocks and dust (or regolith) from the surface (Figure 2).

Simultaneously, the team—many of whom were involved in both operations and science—needed to produce timely and impactful manuscripts within a finite funding period. To support this need, the mission implemented the following measures:

1. The establishment of an editorial office to manage publications. An editor with a relevant scientific



Figure 1. Asteroid Bennu, as viewed by the OSIRIS-REx spacecraft in 2018. Bennu is about 500 m in diameter, a little taller than the Empire State Building. (Credit: NASA/Goddard/University of Arizona)



Figure 2. Artist's conception of the OSIRIS-REx spacecraft descending to the surface of Bennu, with its sampling arm extended for touchdown. (Credit: NASA/Goddard/University of Arizona)

background was recruited for this purpose, working closely with the PI and other scientific leadership on the mission to coordinate and review manuscripts.

2. A publication plan, co-developed with authors before the asteroid encounter, that defined the manuscripts to be produced during the funded period. The plan indicated which manuscripts were associated with the data products required by the sponsor, making it possible to track the fulfillment of requirements via peer-reviewed publications. The plan was also used to justify co-investigator budgets.

Of course, a plan made before the acquisition of data must be able to evolve, and this was especially the case for OSIRIS-REx, which encountered several scientific surprises in its exploration of asteroid Bennu—including, for example, an unexpectedly rocky surface that periodically ejects small particles into space.^{4,5} Authors were therefore able to propose revisions and additions to the plan as the mission progressed. The editorial office coordinated the review of these proposals by mission leadership and kept the plan updated with approved changes.

3. A dedicated review step by the editorial office before journal submission that checked manuscripts for appropriate cross-referencing, co-authorship, consistency, clarity, mechanics, and style. This step additionally involved evaluating the suitability of the paper for its target journal and tailoring it or making alternative recommendations as needed. The editorial office also reviewed manuscripts after revision in response to peer review, before resubmission to the journal, to recheck for consistency and identify any updates necessitated by the progress of other papers.

- 4. A publication guide for authors, which outlined the manuscript proposal and review processes mentioned above; provided a reference for mission style, terminology, phases, and important locations and dates; and included an appendix of foundational references underlying the mission design, instruments, observations, and key findings as they developed.
- 5. A weekly email update to the mission team on the progress of manuscripts in internal and external review. This kept the team briefed on one another's activities and offered the opportunity to highlight successes. It also included recent related publications from outside the mission to help authors stay on top of emerging literature in the field.

Together, these measures helped to identify collaboration opportunities, address potential conflicts, strategically coordinate the timing and content of manuscripts, and verify mission success.



Figure 3. Publication counts (left) and citation counts (right) for OSIRIS-REx manuscripts between 2013 and 2021. Data from Web of Science.

Our ability to assess the efficacy of this internal publication management approach is limited without a control version of the mission with which to compare outcomes. Nevertheless, the numerous papers published by the mission during asteroid proximity operations (Figure 3)—including 3 special issues, 2 of which were in the *Nature* and *Science* families, respectively—point to high productivity and quality. The mission produced its highest yearly count of manuscripts in 2020—the same year that the COVID-19 pandemic emerged and the team was occupied with rehearsing and performing the critical sample collection maneuver.

The OSIRIS-REx spacecraft delivered the asteroid sample to Earth on September 24, 2023. Now a 2-year period of concentrated, globally coordinated laboratory analysis will commence, again accompanied by an ambitious and contemporaneous publication effort.

Below, we summarize the takeaways from asteroid operations, which will continue to guide the mission through sample analysis and may be beneficial for other large collaborations:

- When planning the project, allocate resources for dedicated personnel to provide editorial support and facilitate internal review.
- Plan manuscripts in advance of data collection, but build in flexibility by establishing a process to revise the plan.

- Map planned manuscripts to anticipated data products and sponsor requirements.
- Review manuscripts with an eye toward how they relate to one another.
- Regularly and centrally communicate publication progress to the team and sponsor.

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- 1. https://www.asteroidmission.org/
- Lauretta DS, Adam CD, Allen AJ, et al. Spacecraft sample collection and subsurface excavation of asteroid (101955) Bennu. Science. 2022;377:285-291. https://doi.org/10.1126/science.abm1018
- Lauretta DS, May B, Bennett CA, et al. Bennu 3-D: anatomy of an asteroid. London Stereoscopic Company/University of Arizona Press; 2023.
- 4. Wolner CWV, Hergenrother CW, Lauretta DS. (2020). Up close with an active asteroid. Eos. 2020;101. https://doi.org/10.1029/2020EO148582
- Lauretta DS, DellaGiustina DN, Bennett CA, et al. The unexpected surface of asteroid (101955) Bennu. Nature. 2019;68:55–60. https:// doi.org/10.1038/s41586-019-1033-6

Natalie Ridgeway and COPE: Collaboratively Addressing Publication Ethics and Integrity

Sarah Frances Gordon and Jonathan Schultz

A key development of the last decade of scholarly publishing has been the rise in importance of the independent support organization. Typically acronymic, these organizations provide assistance, education, and standards to the scholarly publishing community. Having just marked 25 years since its founding, the Committee on Publication Ethics (COPE) was one of the first of these organizations and has become a crucial source for guidance and education on publication ethics for journals and editors. As COPE Executive Officer, Natalie Ridgeway has been instrumental in steering the organization through recent changes and expansion as the recognition of the importance of publication ethics has grown.

Science Editor spoke with Natalie about her history with COPE, its growth as an international organization, and the intersection of diversity, equity, and inclusion and ethics.

Science Editor: How did you become involved with COPE?

Natalie Ridgeway: I joined COPE back in 2010, starting as the Operations Manager. Back then I was the only employee, and we were supported by a freelance administrator who had been there right from the early days. Then around 2013, my job was moved into what it is now the Executive Officer.

SE: It appears that COPE has expanded the number of staff since then too.

Ridgeway: We have. It was just me and the administrator for quite some time and we were supported by a freelance web manager and then another freelancer who supported us with our membership applications to ensure a high-quality standard for COPE membership. In 2017, COPE started to increase the number of staff in recognition of the complexities

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within publication ethics and how it was expanding and coming to prominence more globally and internationally.

At that time, our membership application role expanded and took on a full-time employee to assess membership applications. Since then, we've also taken on an Engagement and Outreach officer, a Facilitation and Integrity Officer, and at the beginning of 2020, a Designer to support branding and design work. We've also recently added back in an Operations Manager to support me and the trustee board as well as the council.

SE: What was it that changed around 2017 that necessitated COPE's expansion?

Ridgeway: I think a lot of it initially started around predatory publishing. We have a very rigorous membership assessment process and with the rise of predatory publishing, we had to be sure that any of our applications were legitimate. And when I started in 2010, COPE itself was probably a fairly niche organization: publication ethics has always been there, but it was kind of secondary to research integrity. Over this time period, we've been able to reach a lot more people, and there is a greater understanding of the need for publication ethics, guidance, and educational support.

Internationally, we are trying to do all we can to support emerging regions and journals and publishers from those regions who are crying out for support, guidance, and education. The reach of COPE and the understanding that publication ethics has become more global.

SE: What role does COPE have in creating a culture of publication integrity and helping global institutions?

Ridgeway: We're very much around providing a collaborative space to discuss those issues. COPE isn't a regulatory body. We're not a statutory body. We don't have any legal framework. We are there purely to guide, educate, and advise. We've worked very hard over the past few years to expand our global reach to try and support those journals and those publishers in a number of ways. We've increased the geographical representation on our trustees and council

board with special calls for nominations from specific regions so they can be represented, and we can better understand the issues that they face. We do outreach work in those areas so that we are not assuming what problems they face. We've done market research as well, which clearly shows that there are differing publication ethics issues that are of bigger importance in different regions. For example, back in 2019, we did research that showed that in South America, "salami slicing" was a big problem, and in India, there are issues around gift and guest authorship. We try to reach out to those regions, understand the issues that they are facing, and provide them with the resources that they need.

SE: Stepping back a bit to you specifically, can you discuss how you got involved in scholarly integrity and publication ethics and what led you to your role at COPE?

Ridgeway: It was one of those things that you kind of just fall into sometimes. Many years ago, when I left university, I started at one of the specialist journals at the BMJ Publishing Group. This was just before COPE was formed at the BMJ specialist journals group. I was aware of COPE, but I didn't have anything to do with it at that time. I was busy elsewhere, as during my time at the BMJ Publishing Group I became involved in their online manuscript tracking systems and implemented their online tracking systems across the whole of the BMJ publishing group.

I got very much into workflow systems and that operational aspect. Once I left there, I went to the Lancet where I started doing all their implementation as well. I was very much around project management, systems, and operations so when the role came up at COPE for an Operations Manager, it felt like a good fit to me at the time.

It was interesting to me to move outside of working on medical STM journals and move into COPE, which has such a broad reach. One of the things on our strategic objectives at the time was to reach out to journals outside of traditional STM-focused areas. I'm not saying that we've been 100% successful there, but we're still trying.

SE: In addition to predatory publishing, what other big changes have you seen in the industry around scholarly integrity and publication ethics?

Ridgeway: To start, models outside of traditional print and online publishing, including preprints, and whether our guidelines might or might not meet their needs. Preprint servers do refer to COPE, but they're not members of COPE. We are also exploring in COPE how we can provide guidance and support the conversations around DEIA (diversity, equity, inclusion, and accessibility).

SE: The intersection between DEIA and ethics is interesting. For example, when something crosses over

from being a personnel issue and becomes a research or publication ethics issue. Not everyone agrees where that line is, so it is important territory to be navigating the next couple years.

Ridgeway: It really is. In mid-October 2022, we had our first annual retreat prior to the pandemic, where the council and trustee board and staff all got together to discuss the issues and direction of COPE going forward. We had a really interesting discussion around that intersection and what guidance we can provide that is related to the ethical situation compared to the personnel situation. For example, if somebody has been found guilty of a particular infraction, whatever that may well be, how does that impact any historical work that that researcher has done, and should it impact that historical work? There are lots of conversations around that, and I don't think there is a right or wrong answer at the moment, but certainly, all we're trying to do is come up with some guidance that editors and publishers may be able to use in trying to determine their own responses to that

SE: What are some of the biggest changes you've seen in the industry in recent years, and where do you see the field of scholarly integrity and ethical publishing heading?

Ridgeway: I think one of the biggest changes is the number of people and organizations that are now involved in this area. It's very interesting to see how many people have comments, thoughts, opinions, and interests about what should happen. I think one of the challenges is not trying to please everybody, which we are never going to be able to do, but instead, navigating a path through that is trying to provide a solution, provide guidance, and provide support and advice that meets most people's needs. I think that is a big challenge, particularly for COPE, but also for other organizations as well. We are grappling with how we can better hear and listen to what people say and how we can try and incorporate some of those opinions and some of those ideas within the remit with which we are structured. How we are structured and how we can better meet those needs is an ongoing conversation within COPE, and I think that's something that will continually evolve as we go forward. Nobody is sure what that should look like or how that would function, but there are certainly lots of ongoing conversations about how we can better ensure the integrity of scholarly literature.

SE: Is there an aspect of COPE that is less well-known that people should know about?

Ridgeway: The most obvious one is that COPE is not a regulatory body. I appreciate people's frustrations because there is no regulatory body for people to go to and COPE

has one of the highest profiles. Fundamentally, COPE is an educational and guidance organization for everybody. We have members, and our primary focus is our members, but we are here for non-members and everybody in the community as well. We are always trying to be collaborative and work together to come to a solution. COPE is never going to be the one that can do it by itself: no one organization can do it alone. Our main focus is finding ways to work with others.

On that point, I want to highlight our volunteers. We have a volunteer trustee board and volunteer council; without them, there would be no COPE. They do this in their own time, and they are very, very committed to providing the guidance and solutions that are needed in the community. The work they do is just amazing. They give their free time to do this, and they do some fantastic work.

For me personally, I've been with COPE now for over 12 years, which has been the longest I've ever been in a position. It's a testament to the fact that the issues are continually evolving. There are constant challenges and there's always something new to learn, so it's always kept the role interesting. It keeps the organization interesting because there are always new things for us to respond to and work on. Even when you think you've seen it all, you really haven't.



How—and Why—to Write a Science News Release

Matt Shipman

Researchers write journal articles to share information about what they've learned and how they've learned it. But those articles are only able to impart that information if people read them. The role of a news release, in this context, is to raise awareness of a new discovery via established news media outlets (even if that discovery is a negative result). Put in more practical terms, the role of the news release is to get reporters interested in writing about new research findings, with the resulting news stories letting a much broader potential audience know that the related journal article exists. So, whether you are a journal editor, a researcher whose work is being highlighted, or someone tasked with writing science news releases, it is important to understand how these releases are developed.

Why Science News Releases Matter

Historically, news releases have been written with the primary goal of getting reporters to write about a given subject. A news release about scientific research cannot fully convey all of the details in a journal article, but it can give reporters a concise overview of the work and place it in context. Ideally, this allows reporters to decide whether they want to read the relevant journal article(s), interview researchers and third-party experts, and do all of the other things necessary to write a news story about the work. This makes news releases useful.

One reason this is of particular relevance to the research community is because news coverage of research findings appears to boost citations of the relevant journal article. It is impossible to both issue a news release for a research finding and *not* issue a news release for a research finding, so it is impossible to generate experimental evidence that news coverage causes an increase in citations. However, there is sufficient evidence of a correlation between media coverage

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and citation rates to suggest that such a relationship exists.^{1,2}

News releases are also worth paying attention to because they can shape the way media outlets cover research findings. For example, there is ample evidence that exaggerations in news releases about health-related research findings are reflected in subsequent news stories about those findings underscoring the importance of accurate news releases that place new findings in the appropriate context.^{3,4}

Lastly, science news releases are important because a wide variety of media outlets no longer rely on journalism. Rather, these outlets simply compile and republish news releases written by research institutions or other organizations. And many of these media outlets, such as ScienceDaily and Phys.org, are read by millions of people every month. In other words, news releases are no longer read solely by reporters; they are read by a wide audience. This places additional emphasis on the need to portray research findings accurately and in context. In short, you can no longer assume that your news release will serve as the starting point for a well-reported news story; it's entirely possible that the news release will be the news story.

Now that we know why news releases are worth writing, let's focus on how to write them.

Getting Started

The first step in writing a science news release is deciding what to write about. Sometimes the person tasked with writing news releases works for a research institution, sometimes they work for a journal. They may have a background in journalism, or the sciences, or both. They may (or may not) have a background in relevant research fields. But regardless of one's professional background, before you can decide which research findings to write about, you need to know what you are trying to accomplish and who your audience is. There are no hard and fast rules for deciding what to write about—you have to understand what your organization's goals are and who the organization wants the new release to reach.

For example, if you are writing the news release on behalf of a journal, you may ultimately be trying to reach that journal's core audience with the goal of getting them to read the relevant article. If you are writing for a research institution, your audience may be funding agencies, peer institutions or the private sector. As the writer, your goals could be anything from highlighting your employer's position as an innovator, their role as a practical problem solver, or that your employer is a bastion of fundamental science.

Once you have some idea of what you are trying to accomplish, and the audience you need to reach to accomplish it, you can make informed decisions about the research you want to highlight through a news release.

Once you know what you want to write about, you need to read the journal article and talk to the research team. Odds are excellent that the science writer preparing the news release lacks the relevant expertise to understand all of the technical details in the article, but it should at least give you a general overview of what the researchers did, why they did it, and what they learned. However, there is ample opportunity for the person writing the release to misunderstand the work, which is why talking to the research team is crucial.

Regardless of how well you think you understood the paper, ask researchers to explain to you what question or challenge they were setting out to address and why. Ask them what they think the key findings are and why. Ask them whether anything surprised them—and why. You need to walk away from that conversation not only understanding what they learned and how they learned it, but how to place that work in context. What questions did this work answer? What questions does it raise? Does it have any applications? How far removed are those applications from practical use? Was it an observational study, an experimental study, or a study that relied solely on computational models? If it's related to human health, how far removed is the work from clinical trials? Is it something that would cost a jillion dollars to implement?

In short, as a news release writer, you need to be insatiably curious not only about the work but about how the work fits into the world around us. Don't stop asking questions until you have a fairly clear idea of what the story you want to tell in the news release will look like.

Writing the Science News Release

The hardest part of writing a news release is usually either writing the headline or writing the first paragraph (also called the "lede").

The headline should be concise, catchy, and intellectually honest. This is not always easy, but it is worth the effort to come up with a headline that meets those criteria. You cannot mislead people—honesty is essential. But if the headline is boring or unwieldy, the vast majority of people will read no further.

The lede is equally important. Tim Radford, former science editor for The Guardian, once wrote: "There are many ways to begin a story. And finding the right opening line can make writing the rest of the story much easier. Finding the right opening line is also important if you want the reader to keep reading."⁵

The lede must tell readers what's interesting about the story and why you're telling them about it now. You do not want to overstate the findings you are writing about, but you also do not have room to include all of the qualifiers that are often associated with research findings. So, for example, you absolutely do not want to say that there was a "cancer breakthrough." You also wouldn't want the lede to use terms like "oncogenic pathways" or "lymphotropic virus-1." Instead, you might say that a study sheds new light on how some viruses interact with their human hosts on a molecular level, and how that can increase the risk of some cancers. It's not horribly specific, but it lets people know what you're talking about right away, as well as why they might be interested. The rest of the release will flesh out some of the details.

However, the rest of the release will only flesh out *some* of the details. A news release is not a thorough recap of the entire journal article itself—that would be both far too long and much too detailed for most of the people reading the release. Instead, the news release should highlight what is interesting and important about the work and place the work in context for the reader. People who want to dive into all of the technical aspects raised in the journal article should read the journal article. (This applies to reporters who may want to cover the work, members of the research community, and anyone else who is curious about the details.)

Here are some of the things you'll likely want to include in the body of the release:

- an overview of the question or challenge that researchers were setting out to address;
- a concise description of the findings;
- why the findings are important (fleshing out what you wrote in the lede);
- the methods used in the study;
- the study's limitations (be honest!);
- future directions for the research;
- the names and affiliations of the researchers;
- where the work is published (including a link to journal article); and
- if applicable, who provided funding for the research.

(Note: this list is paraphrased from Shipman.⁶)

In addition, the body of the news release should usually include at least 1 quote from someone on the research team. A quote not only provides insight into the researcher's perspective, it lets reporters know that the researcher is capable of talking about the work in an accessible way.

A key issue when writing a science news release is that your reader needs to understand what you are saying.

This does not mean that you have to avoid using jargon or technical terms. Jargon can be immensely valuable since it often allows you to convey a great deal of information in 1 short word or phrase. However, if you do use jargon, you have to define it. For example, if there's a technical term for a key concept that you will be referencing repeatedly in the body of the news release, it may be useful to define the term early in the release. It could be as simple as including a sentence in the second or third paragraph that begins "At issue is a phenomenon known as [X], which is...". Having done that, you can then use the term X in the remainder of the release without confusing your reader.

The last issue I'll single out here is how long a news release should be. I used to think a news release should not exceed 500 words in length, because the conventional wisdom was that writing for online audiences had to be short. I no longer believe that. In my experience, the length of a piece is less important than what the release has to say. In other words, a news release should be as long as it needs to be—say what you need to say and then stop. If you write 1,000 words that are compelling and keep the reader's attention, it is not too long. If you write 400 words, but lose the reader's interest, it is too long.

Review and Editing

Once you've completed a first draft of the release, standard practice is to share it with the researchers who did the relevant work. This gives them an opportunity to identify anything that is technically incorrect. It also gives them an opportunity to highlight anything in the release they feel has been placed out of context, over- or under-emphasized and so on. Ultimately, you want the researchers to feel comfortable with how you are presenting them and their work.

However, while it is critical to address any concerns the researchers have, it is also important that the release remain accessible to nonexpert audiences. If the researchers want to rely solely on technical language and inaccessible jargon, then the news release serves no purpose. The goal of the release is to help people get a broad understanding of what is interesting or important about the work. It bears repeating that readers who want all of the technical details can refer to the journal article.

Once you've incorporated any necessary revisions from the researchers, it's time to edit the release. Broadly speaking, editing should ensure that the release is highlighting the key points and can be easily understood. In addition, the copyediting process identifies any punctuation or grammatical errors. Ideally, editing would be done by a third party. However, depending on the size of the organization drafting the release, there may not be another writer/editor on staff.

What Next?

Once the release has been written, revised, and edited, you need to decide how to distribute it.

Generally, whatever organization wrote the release will publish it on the relevant organizational website, such as their newsroom site. The organization will also likely send the release to a mailing list of reporters who have a track record of covering related topics. Professional communicators at the relevant organization may also want to reach out to reporters individually to let them know about the relevant findings and provide a link to the news release in case reporters are interested in learning more. Organizations, or the researchers themselves, can also share the news release with any relevant funding agencies, who may amplify the release by resharing it through their own channels. Lastly, the release can also be posted on a variety of news release distribution sites such as EurekAlert, AlphaGalileo, or Newswise. These news release distribution sites do help organizations reach an audience of reporters. But they also serve as a way to feed research items to news aggregation sites, such as ScienceDaily or Phys.org, which amplify the reach of the news with the general public.

This is a concise overview of how to go about crafting a news release about research findings, but most of the rules here should be viewed more as guidelines. Yes, a news release must be honest and accurate about the researchthat is nonnegotiable. On the other points, there is often room to maneuver. For example, you can use more technical language when writing about work that may be of interest almost exclusively to news outlets that focus on disciplinespecific audiences. And it is okay to have fun with the subject, as long as the researchers are on board and you keep your target audiences in mind. (I once wrote a headline about forensic research that included the phrase "Hips Don't Lie," if that tells you anything.) Ultimately, if done well, news releases are a useful tool for raising the visibility of scientific discovery with all types of people. And in an increasingly crowded marketplace of ideas, there is very real value in that.

- Phillips DP, Kanter EJ, Bednarczyk B, et al. Importance of the lay press in the transmission of medical knowledge to the scientific community. N Engl J Med. 1991;352:1180–1183. https://doi. org/10.1056/NEJM199110173251620
- Kiernan V. Diffusion of news about research. Sci Comm. 2003;25: 3–13. https://doi.org/10.1177/1075547003255297
- 3. Sumner P, Vivian-Griffiths S, Boivin J, et al. The association between exaggeration in health related science news and academic

press releases: retrospective observational study. BMJ. https://doi. org/10.1136/bmj.g7015

- Sumner P, Vivian-Griffiths S, Boivin J, et al. Exaggerations and caveats in press releases and health-related science news. PLoS ONE. 2016;11:e0168217. https://doi.org/10.1371/journal. pone.0168217
- Radford T. A manifesto for the simple scribe my 25 commandments for journalists. Guardian. 2011. https://www. theguardian.com/science/blog/2011/jan/19/manifesto-simplescribe-commandments-journalists
- 6. Shipman WM. Handbook for science public information officers. Chicago University Press; 2015.



Keynote: When Good Intentions Just Aren't Enough: Engaging Diverse Communities as Partners in Knowledge

SPEAKER: Alpha Abebe, PhD Assistant Professor, Communication Studies & Media Arts, Faculty of Humanities McMaster University REPORTER: Peter J Olson JAMA Network

A fundamental aspect of the scientific enterprise is that it begins with a question about our world and the way it works. What comes next is extensive, laborious research that may or may not yield satisfactory answers, and there is always more work to be done to convert newly acquired knowledge into progress. The same can be said about endeavors to implement principles of diversity, equity, and inclusion (DEI) within the scholarly publishing industry. In her keynote address at the CSE 2023 Annual Meeting in Toronto, Dr Alpha Abebe accentuated the importance of weathering and even embracing the inherent challenges that come with efforts to bring about systemic and sustainable change. And—not unlike the scientific enterprise—one of those challenges is asking ourselves: Are we asking the right questions in the first place?

A community practitioner and community engagement researcher, Abebe began by noting her appreciation of the theme of the CSE meeting, "Reflecting on Community: Opening Borders in Scholarly Publishing," and went on to pose a series of questions that laid bare both the opportunities and the problems that accompany efforts to dismantle barriers within the scholarly publishing industry. Citing a formative experience during her postgraduate studies that shifted her perception of the concepts of data and knowledge, she posited that alternative voices, nonscholarly material, and lived experience are in fact forms of information that can make science more innovative, more rigorous, and more reflective of the world at large. Furthermore, the recent global reckoning with systemic inequities has opened the floodgates for important-albeit difficult-conversations about DEI-inspired paradigm shifts and has generated a wave of unprecedented social action on multiple levels. However, fatigue is setting in; much of





Alpha Abebe, PhD

the initial, well-intentioned zeal is fading and/or ringing hollow, and the political pendulum is beginning to swing in the other direction.

It was here that Abebe reiterated the crux of her talk: Good intentions will only take us so far. If community engagement efforts are treated as nothing more than a moral imperative and are limited to performative action and abstract proselytization, they will wash away with the shifting societal tides. To that end, Abebe highlighted 4 critical questions that the scholarly publishing community should ask itself.

1. How Do We Define Knowledge?

In our efforts to define knowledge as it pertains to scholarly publishing, Abebe proposed that the academic and editorial publishing process is not a "value-neutral enterprise." While stating that knowledge production is an exercise of power, she also noted that French philosopher Michel Foucault upended the traditional notions of power:

We must cease once and for all to describe the effects of power in negative terms: it "excludes," it "represses," it "censors," it "abstracts," it "masks," it "conceals." In fact, power produces; it produces reality; it produces domains of objects and rituals of truth. The individual and the knowledge that may be gained of him belong to this production.¹

As we reflect on our understanding of knowledge, Abebe said, it's important to consistently acknowledge the power being exercised in editorial decision-making processes to engender a sustainable sense of accountability and stay attentive to our responsibilities. Furthermore, reflections on knowledge should include reflections on systemic industry hierarchies, which have historically placed particular voices, histories, and forms of knowledge along a spectrum of legitimacy. As one example, Abebe noted that while lived experience is often leveraged as data to substantiate empirical projects, it is rarely acknowledged as a viable form of expertise or theoretical framework. There are myriad ways in which people make sense of their world, so it's insufficient to simply incorporate new perspectives into existing knowledge structures—it's important to first be curious about what other forms of knowledge may exist, then seek them out.

2. Why Do We Seek to Engage New and Diverse Communities?

Abebe has participated extensively in community engagement activities with a wide range of stakeholders over the years. When the group being engaged is from a historically marginalized community, she said, there is often a sense of surprise from the facilitators when an activity actually yields insightful results. Abebe finds this reaction telling. To her, it reveals that the bar is often set very low, and that DEI-related projects are often undertaken purely for their own sake and not necessarily because the organizers are expecting tangible improvements as an outcome.

Honest conversation is paramount, and the right questions need to be asked at the outset. Do we truly feel there is a gap to be filled? Why are we motivated to open our borders and hear from new voices? Nurturing a culture of excitement about the prospective skills and expertise offered by new and diverse communities can fundamentally change an institution's approach and ultimately lead to meaningful outcomes. Superficial engagement is at best counterproductive, Abebe said at worst, it can be damaging for the communities with whom you're engaging. True progress can be made only when we recognize that community engagement activities have the very real potential to make substantial and sustainable impacts on our work, our institutions, and our world.

3. Who Are We Trying to Engage, and How?

Building bridges with groups that have been systematically excluded takes time, resources, and patience—and to complicate matters, Abebe noted, the very hierarchies we are attempting to dismantle via our engagement with diverse communities often exist within those communities. Once again, a question is key: Are we ensuring that our efforts are not reinforcing the status quo and amplifying dominant and narrow perspectives? Assessing the power dynamics and representational issues within the community you hope to engage is arduous work—and there are multiple pitfalls to avoid.

First, it's very easy-but also lazy, Abebe submittedto write off a community's lack of engagement as a deficit within that community. "We have a great initiative, they're just not coming" or "They just don't understand the value of this work" are common responses that dismiss and distract from the deficits within our own systems. Second, the events of the last few years have led to physical and emotional fatigue among many people, hence there is considerable opportunity cost associated with taking on new tasks and commitments; these costs should be taken seriously and may require additional resources to mitigate them. Third, the group being engaged should be asked to help set the agenda. No matter how well-intentioned an initiative is, a group is less likely to simply hop on board if they haven't been involved in developing it—and engaging a group early on is an opportunity for relationship building and developing a sense of ownership of that initiative. Finally, it's critical to look at the full picture. If a group is not participating in an engagement effort, look further upstream. If you feel you've done good work but are struggling to see the sustainable impact, look further down the pipeline to try to understand what's happening on the other end.

4. What Do We Stand to Gain and Lose from This Work?

Abebe issued her final question with an alert: The tide is shifting. Communities are redefining the terms of engagement and are rethinking traditional knowledge systems. Younger people, in particular, have spent their formative years in an age of social reckoning and are impatient with the status quo. Additionally, the definitions of rigor are being reshaped to include a wider range of perspectives and analyses; people are asking important questions about what data looks like, what science looks like, and what knowledge looks like. If the scholarly publishing community refrains from asking some of these same questions, Abebe insisted, there is much to lose—but there is much to be gained by asking the same questions within our institutions and remaining open to new voices, new perspectives, and new knowledge systems.

Yet such gains come at a cost. Authentic community engagement is grueling work, and Abebe stressed that discomfort is a critical component of the process. To illustrate this, she asked audience members to cross their arms, knowing that most would subconsciously place the dominant arm on top. She then asked that they cross their arms again, but to intentionally place the nondominant arm on top. The hesitation and awkwardness that ensued emulated the process of community engagement, Abebe

said; critical thinking often requires that we put ourselves in uncomfortable positions, and the act of power redistribution means that someone, somewhere is losing a certain amount of power—a process that is rarely if ever comfortable.

Abebe closed with a quote—and a compelling concept—from Sherene Razack:

Yet our structural in-betweenness also generates a deep commitment to being critically reflexive. We are committed to navigating what we already know to be a trap. Unwilling to believe that we are, as Malcom X insisted, either part of the problem or the solution, we embrace this in-betweenness where things can feel temporarily ethical, even as we never stop worrying that there is no pure ethical dwelling place.²

Noting that community engagement—like scientific research—often feels like 2 steps forward followed by 1

step back, Abebe praised the nuance of this quote, which suggests that although there is no destination of ethical purity that can ever be reached, any efforts to reach it are far from futile. Referring to a "fundamental asymmetry" that exists in any system of knowledge production, she implored her audience to embrace Razack's concept of ethical "in-betweenness"—because what can often seem ineffectual in fact has intrinsic value that should propel us forward in our efforts to better our institutions, ourselves, and our world.

References and Links

- 1. Foucault M. Discipline and punish: the birth of the prison. London: Penguin; 1975.
- 2. Razack SH. Afterword: researchers of good will. In: Macías T, editor. Unravelling research: the ethics and politics of research in the social sciences. Fernwood Publishing; 2022. p. 211–219.



Call for Diversity, Equity, and Inclusion Scholarly Resources

CSE has launched a repository of journal and organizational statements related to diversity, equity, and inclusion.

Many journals have begun working to improve editorial board diversity, evaluate peer review processes for implicit bias, revise guidelines for authors, or develop training opportunities, while others are struggling with where to start.

Has your journal or organization issued a statement about policies and practices related to diversity, equity, and inclusion? Please consider sharing your efforts with our community by completing the <u>DEI Resources Submission Form</u> on the CSE homepage under "Resources."



Submitted resources will be publicly available on the CSE website.

Ethics Clinic: Diversity, Equity, and Inclusion and Beyond

SPEAKERS:

Stacy L Christiansen Managing Editor *JAMA*

Daniel T Kulp Senior Editorial Director and Chair

American Chemical Society and the Committee on Publication Ethics @dtk1964

Leonard Jack, Jr

Editor in Chief Preventing Chronic Disease Journal Centers for Disease Control and Prevention

MODERATORS:

Jennifer Lee Mahar Managing Editor

Origin Editorial

Danny Lambert

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Jill Jackson

Co-chair CSE Editorial Policy Committee Managing Editor and Publishing Administrator Annals of Internal Medicine

REPORTER: Kevin Gladish Staff Editor

Journal of Graduate Medical Education

The Ethics Clinic, sponsored by the CSE Editorial Policy Committee, is a highly interactive crowd favorite held at each CSE Annual Meeting in which speakers bring real-life cases for discussion for each table of participants to review, discuss, and present their ideas. After each round of group discussion and sharing, the speakers present the status of each case, along with any rationale that led to decisions thus far. This year's clinic focused on ethics in diversity, equity, and inclusion. Each year, the Committee uses the theme of the annual meeting to frame the topic for the clinic.

Case 1: Offensive Terminology

The first case introduced by Stacy Christiansen of JAMA presented a portion of an accepted manuscript at a US medical journal containing a term for a study population that the editor felt could be offensive to Western audiences. However, because the study was based outside North America, the editor was unsure about making edits to a term that could be accepted locally. Discussion groups proposed including an explanatory footnote regarding the term's context. They also discussed why the term was not caught in peer review, and whether there was someone on the editorial board from that part of the world who could

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provide such context. Groups also thought the author's background was important and that they should be included in the conversation.

This case was resolved by emailing the managing editor of a prominent journal in that part of the world, and learning that, while the potentially offensive term had been used in the past, the journal was working to change it. With that managing editor's guidance, and with the author's buy-in, the term was removed from the published text.

Case 2: Al as Author

The second case presented by Christiansen described a manuscript submitted to a medical journal with 2 authors listed: a very prominent physician-scientist and the artificial intelligence (AI) model ChatGPT. Participants unanimously felt that ChatGPT could not qualify as an author, as it cannot be responsible for analysis or data collection, nor can it transfer copyright. Also, regardless of the reputation of the first author, AI should not be listed as a co-author. This case also opened the conversation to how authors should be required to report their use of AI, as well as whether peer reviewers should be allowed to use it at all. Confidentiality and copyright issues were major concerns, since when running a paper through ChatGPT, it retains the information.

The paper was ultimately not accepted because ChatGPT cannot fulfill the criteria for authorship. Many attendees agreed that AI can be a useful tool if used transparently, sparingly, and for a good reason. Reviewers need to be explicit on how AI is used and must keep any submitted work confidential, never pasting a draft of a paper into an AI program.

Case 3: Historical Content

The third case was presented by Daniel Kulp, Senior Editorial Director, American Chemical Society, and Chair of the Committee on Publication Ethics (COPE), who began by introducing COPE, discussing its Diversity, Equity, Inclusivity, Accessibility Subcommittee, and encouraging attendees to visit the resources on the COPE website.¹ The case dealt with a society journal that has been receiving complaints about some historic papers outlining a practice that the society no longer endorses and that is now deemed to be offensive, or even potentially harmful. The society issued an apology, and the authors expressed regret about their involvement, but the paper is still being cited and generating anger on social media. Discussion centered around how to deal with historical content that

was accepted at one time but is considered unacceptable or harmful by today's standards.

Participants felt that a retraction would not be helpful, nor would it be feasible to retract everything in the past that has since been disproven. Rather, the journal should encourage discussion, education, and awareness of why a certain practice is no longer acceptable by writing an editorial. In the end, an editorial was indeed published, and the authors apologized, placing their involvement in historical context. The society did not retract the paper but used it as an opportunity to have a larger discussion.

Case 4: Alleged Author Discrimination

Also presented by Kulp, the fourth case arose from an initial request from a corresponding author to retract a published article because of an alleged author dispute, a situation that normally does not warrant a retraction. After requesting more information, and not hearing from the institution in a timely manner, the journal published an expression of concern (EOC). Following this, the journal learned that the institution found not an author dispute, but evidence of research misconduct, which prompted the journal to retract the paper. After informing the author of the retraction, the journal learned that the author had lodged a complaint with the National Institutes of Health (NIH) Office of Research Integrity, insisting that they had been the target of racial discrimination by the institution. The journal then put the retraction on hold.

In this complex case, participants weighed how to ensure the validity of the paper while not potentially being part of any discrimination against the author. Some felt that the evidence of misconduct should be considered separately from the issue of discrimination and was likely enough to retract the paper. Currently the case is still ongoing, and the EOC is still posted. Participants and the presenter agreed that, if a retraction does occur, the journal would need to be very clear on which protocols were not followed and why they were grounds for retraction, clearly separating issues of validity from the larger NIH investigation. Regardless of the decision, great care should be taken in communicating the action taken and the reasons for it.

Case 5: Learning from Mistakes

The final case, presented by Leonard Jack, Jr, of *Preventing Chronic Disease*, focused on an essay published in

Neurology that was racially and culturally offensive to readers. The piece in question was a reflective essay in a journal's humanities section. It contained vivid descriptions of a patient and his wife that perpetuated racial and cultural stereotypes, sparking numerous complaints. The article also provided details that may have compromised the patient's confidentiality. Groups were encouraged to discuss how journals can be proactive when things go wrong.

Participants voiced concerns about the need for diverse editorial and peer review, so that people from multiple backgrounds and perspectives are viewing articles and catching potentially offensive content. The journal in question did an excellent job of creating space for feedback, making immediate changes to correct the issue going forward, and quickly communicating these to its readers. These actions included mandating diversity review of all articles, efforts to increase diversity on the editorial board, and commitment to continuous diversity, equity, and inclusion efforts. The article itself was retracted, and a commentary was soon published addressing what went wrong and what was learned.

Key takeaways from this case included the need to recognize that, while implicit biases may be unintended, they can have serious consequences. Deeply rooted assumptions creep into decision-making in unrecognized ways-even among the most well-intentioned authors, peer reviewers, journal editors, and organizations-that can prevent the best science from being produced and published. We should avoid papers that attempt to label people or generalize based on a characteristic and be very cautious when assuming any role of "cultural interpreter." Furthermore, if a journal puts anything in writing about a commitment to change, it would be helpful to provide its readership with updates on progress being made to achieve those commitments. Finally, we need to be able to share our experiences of making mistakes without shame so that we can have transparent conversations and help each other do better.

The Editorial Policy Committee is always welcoming new members; please contact any one of the moderators for information.

References and Links

1. http://www.publicationethics.org

Incorporating Demographic Data from Authors, Reviewers, and Editors to Understand and Reflect the Diversity of Your Community

MODERATOR:

Anna Jester Vice President of Sales & Marketing eJournalPress Wilder Dector Solutions

Wiley Partner Solutions

SPEAKERS:

Mary K Billingsley Managing Editor American Academy of Child and Adolescent Psychiatry **Christine Beaty** Director of Journal Operations American Heart Association

Donna Tilton, ELS American Journal of Sports Medicine

REPORTER:

How would someone describe you? We are all categorized in different ways at different times and for different purposes. If your publication or organization is considering ways to incorporate demographic data from your stakeholders, one of the main takeaway points from this session is that selfreporting is key; that is, allowing the person to choose their own labels and definitions.

Anna Jester, the moderator for this session, emphasized from the start that organizations looking to gather demographic information should follow these steps: Think, Plan, Define and Refine, Collect Data, Do Good, Repeat.

Mary Billingsley, Managing Editor, American Academy of Child and Adolescent Psychiatry (AACAP) and Christine Beaty, Director of Journal Operations, American Heart Association (AHA), then shared their experiences with collecting and using demographic information.

Think: Why Are You Collecting the Data?

Both the AACAP and AHA started with overall commitment goals at the society level. In tandem with AACAP initiatives, journal senior leadership published a statement in 2020¹

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committing to an antiracist vision for journal operations with specific initiatives and goals. The AHA established a 2024 Impact Goal² to advance cardiovascular health for all, including identifying and removing barriers to health care access and quality. As part of this goal, the journals committed to assess the diversity of authors, including those writing editorial commentaries.

Plan: What Are You Going to Do?

Journals need to collect demographic data from authors, reviewers, and editors to identify gaps and measure change over time.

The AHA journals created an Equity Diversity Inclusion Editorial Board³ to help the journals to fulfill the commitment to health equity in the content of the journals and to increase diversity among the author and reviewer pools by establishing benchmarks and evaluating progress. As an editor for an AHA journal stated: "What gets measured, gets done."

Define and Refine

The AACAP journals began collecting user demographic data in 2020 using a schema adapted from other psychiatry publications, have used those data to report aggregated information about the makeup of the editorial boards, and have begun using the data to benchmark author and reviewer activity. The journals are planning more in-depth analyses of manuscript decisions and the review process to identify biases. At the same time, plans are moving forward to align demographic data collection across the society-journals, meetings, membership, etc.-using a combination of the Joint Commitment schema and GuideStar/Candid schema to help refine the questions they ask regarding options for race and gender identities. They are setting clear goals and objectives that will be transparent to users so that they know why the data are being collected and how they will be used. These goals



and objectives will be continuously reviewed and adjusted as needed.

Collect Data

This was the meat of the discussion, with many audience questions regarding specific reporting from different editorial systems. Both presenters described adding mandatory self-reporting fields in the profile area of their manuscript tracking systems.

The AHA journals had been collecting data on the editorial teams for several years and reporting to the publications committee. With the 2024 Impact Goal announcement, they added more detailed collections on authors and reviewers. In the editorial management system, the demographic fields are required, and users are required to update their answers once a year; but of course, the option of "prefer to not answer" is always available.

The basic principles in data collection include: providing clear information on consent and confidentiality and what the purpose and intended use of the data are, providing multiselect check boxes and open-ended questions as well as "decline to answer" option, treating the data with sensitivity and confidentiality, and reporting regularly.

Do Good

The "easiest" place to start is the journal masthead, where you can identify self-reported demographics from editors and editorial board members to identify underrepresented groups and develop programs to increase diversity and equity. But the AACAP journals were also able to look at data on reviewers and authors to consider questions such as whether women were declining reviews disproportionately during the early months of the COVID-19 pandemic. The collected data showed that women were being invited as often as men and were not declining reviews more often compared with the same time frame in the year before the pandemic. Information on authors facilitated a limited analysis of acceptance rates and whether the call for papers on antiracism attracted new authors.

The AHA editorial office has created a report based on standard report parameters that can also be filtered by role (e.g., authors, reviewers, editors), which provides aggregated demographic data as overall numbers and percentages. What do they do with these data? Data are presented to editors multiple times a year to help them evaluate their progress. Each calendar year, the data are reviewed to evaluate editor goals, and reports are made to the AHA board on the goals. Public data are provided on the journal websites. Data are presented in aggregate across the entire portfolio of journals regarding the editorial team and invited author and reviewer diversity.

Repeat

Christine Beaty reported that for the AHA journals, progress is visible but slow. They now have open calls for associate editor positions and offer flexibility in workload to allow younger, early-career members to participate. Editors are reminded to seek out authors and reviewers outside their usual networks.

For some medical specialties, the plan may need to be adjusted to set reasonable goals, like trying to reflect the community rather than forcing diversity that doesn't yet exist. Organizations should also actively avoid overburdening vulnerable colleagues who may be repeatedly asked to fill these gaps.

After the presentations, there was a lively discussion with audience questions on how to extract reports from Editorial Manager and how this data collection and reporting affect staff workloads. Questions of privacy and confidentiality were also raised. Journals should be careful in how they handle these data and train staff who have access.

Collecting and controlling data on your editors, authors, and reviewers is still a developing science, and many journals are just starting the process. How these data are collected and how they can be used to meet the goals of scholarly publications will continue to be a topic of discussion. CSE has a list of DEI Scholarly Resources on the website to help you keep up to date: https://www.councilscienceeditors. org/dei-scholarly-resources.

- 1. https://www.jaacap.org/article/S0890-8567(20)30388-9/fulltext
- https://www.heart.org/en/about-us/2024-health-equity-impactgoal
- 3. https://www.ahajournals.org/edi-editorial-board

Text Recycling in Scientific Writing: What Editors Need to Know

MODERATOR: Kelly Hadsell Federation of State Medical Boards SPEAKERS:

Cary Moskovitz Duke University David Hansen Authors Alliance @DigLibCopyright REPORTER: Ruth Isaacson Genetics Society of America

Text recycling has long been a source of confusion for researchers, editors, and publishers and is inappropriately regarded as a form of self-plagiarism. To provide clarity regarding text recycling and consensus about what is ethically and legally acceptable, the Text Recycling Research Project¹ (TRRP), a multi-institution, NSF-funded initiative, investigates text recycling in STEM research. TRRP members Cary Moskovitz and David Hansen shared some of the TRRP findings and recommendations.

TRRP's definition of text recycling is as follows:

Text Recycling is the reuse of textual material (prose, visuals, or equations) in a new document where (1) the material in the new document is identical to that of the source (or substantively equivalent in both form and content), (2) the material is not presented in the new document as a quotation (via quotation marks or block indentation), and (3) at least one author of the new document is also an author of the prior document.²

Moskovitz explained that in publishing, editors often ask authors to rework their materials in 1 of 3 ways to avoid ethical and legal concerns. While on the surface these appear to be reasonable approaches, Moskovitz detailed why text recycling is often more appropriate.

Summarize and Cite

Editors may ask authors to paraphrase and cite text when it is recycled from a large block of text. However, when documents are behind paywalls, this limits access to the original text, and readers lack necessary information that could have been recycled from the original source.

Quote

Editors may ask authors to quote the original work. Placing text in quotation marks places unnecessary emphasis on the words used and should be reserved for content that authors

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want to highlight, particularly text from different authors. Text recycling is also rarely limited to one concise passage but is often fragments of text as shown in the highlighted portions of Figure 1. Quotation marks in these cases would be highly inappropriate and distracting.

Reword

Editors may ask authors to reword the text that is being recycled. There are limited ways (especially in the materials and methods section) to reword something and in the case of a non-native English speaker, creates additional linguistic challenges. Yet, authors and editors fall back to this tactic frequently. Figure 2 shows an example of 3 papers from the same author group with rewording; such changes make it more difficult for readers to clearly understand what has changed and what is the same between the papers.

Understanding the different types of text recycling could help editors and other stakeholders determine when text recycling is appropriate. Moskovitz and Hansen shared that the terms *duplicate publication*, *redundant publication*, *self-plagiarism*, and *text recycling* are used with different meanings by different organizations. To help stakeholders distinguish between types of text recycling, the TRRP has developed a new taxonomy³ (Figure 3).

- **Developmental recycling:** reuse of material from unpublished work; common and generally acceptable
- Generative recycling: reuse of portions of a previously published work in a new work that makes an original intellectual contribution; could be ethical or legal depending on circumstances
- Adaptive publication: republication of an entire document or the central part(s) but modified for the new context; ethical or legal depending on publisher permission and transparency with editors and readers
- Duplicate publication: publication of the same work and with the same genre, content, and intended audience as the previous document; considered unethical and likely illegal depending on copyright infringement or author-publisher agreements

These types of text recycling have varying levels of ethical and legal concerns. Hansen noted that within the United States and Canada, there exists no law about text recycling, and in most jurisdictions, no law addressing plagiarism. However, stakeholders express significant concerns about the legality of text recycling and conflate plagiarism with copyright violation.



Figure 1. Text recycling is often fragments of text as shown in the highlighted portions.

One area of confusion is generative recycling where small portions of a previously published work are reused in a new work, such as in Figure 2. Because authors and publishers often have agreements in which the publisher holds copyright and the authors have received exclusive rights, the concern here is not plagiarism, but legal use within the copyright agreement. The fair use provision of U.S. copyright law provides the author with the exception for common types of reuse, but most publishers do not address text recycling in their agreements, and authors must read between the lines and guess as to whether their reuse violates copyright law or their signed contract. The TRRP

NEJM 2011	During 12 months of follow-up in the first 6000 children in the older age category, the incidence of the first or only episode of clinical malatia meeting the primary case definition was 0.44 per person-year in the RTS.S'AS01 group and 0.83 per person-year in the control group, exosting in a vaccing officacy of 55.8% (97.5% conditioned interests) (CTI, 50.6 to 60.4)
NEJM 2012	In the per-protocol population, the incidence of a first or only episode of elinical malaria meeting the primary case definition during 12 months of follow-up was 0.37 per person-year in the R18.8 A801 group and 0.48 per person-year in the control group, for a varchine efficacy of 31.3^{9} 197.5^{4} or $1.23.6$ to 38.3^{1}
PLOS Med 2014	The incidence of all episodes of clinical malaria meeting the primary case definition during the 18 mo of follow-up in the per-protocol population was 0.69 person-year in the RTS.S AS01 group and 1.17 person-year in the control group resulting in a VE of 46% (95% c1 42% to 50%)

Figure 2. An example of 3 papers from the same author group with rewording.

encourages publishers to resolve this confusion by explicitly giving authors the legal right to recycle from their papers in future publications in plain English—so long as that reuse adheres to the TRRP Best Practices for Text Recycling or some other ethical recycling guidelines.

In addition to the suggestion for publishers, Moskovitz and Hansen shared the TRPP's recent best practices for researchers: $^{\!\!\!\!^4}$

- Authors should recycle text where consistency of language is needed for accurate communication.
- Authors may recycle text so long as the recycled material is accurate and appropriate for the new work and does not infringe copyright or violate publisher policies.
- Authors should be careful not to recycle text in ways that might mislead readers or editors about the novelty of the new work.

Moskovitz stressed that the word "should" in the first recommendation was chosen with a lot of deliberation. If keeping the language the same between the original source and new work results in better communication and consistency, authors should choose this route. Transparency is also important, and rather than make superficial changes that could reduce clarity or mislead readers, authors should be upfront about if text has been reused.



Figure 3. New taxonomy for types of text recycling, developed by Text Recycling Research Project (TRRP).

To recycle text legally, the TRRP recommends the following:

- For most unpublished work (unpublished research manuscripts, preprints, grant proposals, conference posters, etc.), authors hold copyright and thus can recycle from that work without legal restriction. (Note: Under "work-for-hire" arrangements, authors do not hold copyright.)
- Most publishers require authors to transfer copyright to the publisher. Authors' rights to recycle from their own published works are then limited by copyright laws, which differ by country.
- Publication contracts may, however, let authors retain some rights to recycle. These rights are contractspecific and differ markedly across publishers. Authors should know what their signed contract allows.

If the amount or type of recycling exceeds what copyright law and the signed contract allows, authors

should obtain permission from the publisher of the source document.

To recycle text ethically, the TRRP recommends the following:

- Authors should be transparent with editors, informing them about the presence of recycled material upon submission.
- Authors should be transparent with readers by including a statement notifying readers that the document contains recycled material.
- If the authors of the new work are not identical to those of the prior work, the corresponding author of the new work should obtain permissions as reasonably possible.

Hansen emphasized that in cases where the use may exceed what copyright law or the contract allows, it's best to ask authors to obtain permission rather than rewrite text. If the original source they coauthored has authors who are not on this new work, they should obtain permission from the lead or corresponding author instead of all authors, as this still shows good faith intent.

Having shared these examples and resources, Moskovitz and Hansen summed up their presentation with this statement. "If authors and editors agree that certain amounts of text recycling are appropriate and good for scientific communication, then the law should not be a barrier."

- 1. https://textrecycling.org/
- Hall S, Moskovitz C, Pemberton M. Understanding text recycling: a guide for editors. Text Recycling Research Project. 2021. [accessed May 15, 2023]. https://textrecycling.org/files/2021/06/ Understanding-Text-Recycling_A-Guide-for-Editors-V.1.pdf
- Moskovitz, C., Standardizing terminology for text recycling in research writing. Learned Publ. 2021;34:370–378. https://doi. org/10.1002/leap.1372
- Hall S, Moskovitz C, Pemberton M. Text recycling. TRRP best practices for researchers. Text Recycling Research Project. 2021. [accessed May 15, 2023]. https://textrecycling.org/resources/bestpractices-for-researchers

Evolving Research Attitudes Towards Journals and Scholarly Publishers

SPEAKERS:

Mia Ricci

Director, Publications Operations American Geophysical Union

Deborah C Poff, CM, PhD

Editor, Journal of Scholarly Publishing

Editor-in-Chief, Encyclopedia of Business and Professional Ethics

Editor-in-Chief, Advances in Business Ethics Research

Dianne Dixon

Managing Editor International Journal of Radiation Biology

MODERATOR: Carolyn deCourt Client Manager, Editorial Services J&J Editorial REPORTER:

Tony Alves SVP Product Management Highwire Press

For the session "Evolving Research Attitudes Towards Journals and Scholarly Publishers," moderator Carolyn deCourt asked the panelists to introduce themselves and provide their credentials. The first panelist and speaker, Deborah C Poff, CM, PhD, is the Editor of the *Journal of Scholarly Publishing*. She also serves as Editor-in-Chief of both the *Encyclopedia of Business and Professional Ethics*, and *Advances in Business Ethics Research*. The second panelist and speaker, Mia Ricci, is the Director of Publications Operations at the American Geophysical Union. The third panelist, Dianne Dixon, who joined for the Q&A portion of the session, is Managing Editor for the *International Journal of Radiation Biology*.

Poff kicked off the session with a discussion of the evolution of the treatment of scholarly publications by universities, and the impact that treatment has on researcher approach to publishing in journals. Poff noted that over the past 30 years, there has been an emphasis on quantity over quality, with a shift toward publishing as many articles as possible to bolster a CV. This shift has opened up the opportunity for bad players, like predatory publishers, who produce substandard journals that abuse open access policies to trick researchers into thinking they are submitting to legitimate journals, and paper mills, organizations that create fake papers and sell authorship to those papers.

Poff blames the pressure to publish on the growing importance of national and international rankings of universities. These rankings are used by governments and funders to direct resources to high-ranking universities. This in turn compels university administrators to put pressure on their faculty to publish more research, including faculty in disciplines that do not have a strong research tradition like fine arts and music. Poff says, "What this translates to for editors of journals is a greatly increased number of graduate students and very junior faculty aggressively struggling to get articles published when they lack the polish and the experience of developing over time within their field." The result is a proliferation of plagiarized and fake papers from paper mills, and the use of predatory journals. It also results in over-emphasizing the sciences in our higher education systems, at the expense of liberal arts and other nonresearch-oriented programs.

Poff advocates an intentional move toward greater diversity in representation at both the institutional level and by journal publishers. She cites evidence from her work at both the *Journal of Academic Ethics* and the *Journal of Scholarly Publishing*, that certain groups, such as women, different racial groups, and persons for whom English is not a first language, are discriminated against. There is a documented "preference of gatekeeper for manuscripts from authors with shared characteristics." By diversifying representation of editors, associate editors, editorial boards, and peer reviewers, journals will be able to mitigate bias in peer review and open up the system to more researchers, alleviating the bottleneck that can contribute to bad practices.

Ricci took the discussion deeper into researcher attitudes by reviewing multiple industry reports, starting with a 2018 Editage survey on author perspectives on academic publishing. Key findings included the following: 76% find manuscript preparation challenging; 66% find journal guidelines unclear; there is general unhappiness with turnaround times (researchers want less than 3 months from submission to publication); 70% find it difficult to respond to reviewers; and perhaps most relevant to Poff's previous discussion, the pressure to publish in high–impact factor journals was an urgent problem.

The second report was Publons' 2018 report on the global state of peer review, which combines data from Web of Science, ScholarOne, and Publons' 2018 Global Reviewer Survey. Key findings include the following: established regions dominate peer review due to geographic biases in the appointment of editors and their tendency to use

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reviewers from their region; emerging regions are increasing representation, but are years away from bridging the gap; finding reviewers is getting harder; reviewers from emerging regions are more likely to accept review requests, but those reviews are shorter in length; more training is needed and universities need to recognize the importance of peer reviewing as an accredited activity.

Ricci then reviewed a 2021 Wiley Open Research Survey which showed 67% of researchers felt that publishing open access (OA) increases impact; 61% felt OA was a public benefit; and 35% were motivated to publish OA for transparency and data reuse. The report also looked at reasons why researchers upload manuscripts to preprint servers, with 30% of authors having uploaded research to a preprint server, up from 20% in 2019. The number 1 reason was "faster dissemination" (45%), the number 2 reason was "get feedback on their work" (34%). Post publications, 84% of researchers report sharing their articles on public and institutional repositories.

The fourth report that Ricci presented was from Renew Publishing Consultants from 2021 examining how readers discover content in scholarly publications. Key findings include the following: abstracting and indexing databases are top search starting points, especially for life sciences; Google Scholar continues to rise in usage; use of preprints are still concentrated in physics; the value of journal websites has gone up; readers seek out OA content; and social media provides accidental exposure to articles.

Ricci wrapped up her presentation with a look at the society publisher perspective, noting that it is a balancing act between open science, inclusivity, and sustainability. Societies are expected to publish high quality science, promote publishing best practices, make the research they publish accessible to all, and most importantly, serve their membership. Ricci points out that publishers and researchers share many of the same goals and that the principles of diversity, equity, inclusion, and accessibility can be applied to all aspects of scholarly publishing.

The session finished up with an engaging, audienceparticipation exercise in creating "word-clouds", and a panel discussion around the most prominent words in those word-clouds. The first question was "What are some publishing pressures you've heard of, encountered, or seen?" (Figure 1) The biggest resulting words or phrases were "timelines", "speed", "finding reviewers", "speed of publication", and "funding and integrity". In reaction, Poff noted that it's hard to find reviewers, but it is even harder to get reviews of papers whose authors are non-English speaking. Dixon added that regional attitude is a problem; she has an associate editor who refuses to handle papers from a particular country. Dixon also suggested that reviewers be encouraged to partner with junior researchers to mentor them on how to peer review.



Figure 1. Word cloud of responses to the audience question "What are some publishing pressures you've heard of, encountered, or seen?"

The second question was "What are the main shifts you've noticed, seen or experienced in your daily work?" (Figure 2) The biggest resulting words or phrases were "Al", "open access", "accessibility", "social media", "automation", "OA mandates", "inclusive language", "metadata", and "researchers refusing to review". An audience member asked, "Do you see Al helping open up the peer review pool?" Ricci responded that there is potential for bridging the language gap, but we still need to develop policies around the use of artificial intelligence. Poff reiterated that we need to rethink peer review; it needs to be more than volunteering—it needs to be an official, recognized activity.



Figure 2. Word cloud of responses to the audience question "What are the main shifts you've noticed, seen or experienced in your daily work?"

Addressing Helicopter Research: Journal Policies for Equitable Collaborations

MODERATOR: Mia Ricci American Geophysical Union

SPEAKERS: James Kigera Annals of African Surgery

Sowmya Swamiathan Springer Nature George Vousden PLOS

Margaret Lartey Ghana Medical Journal REPORTER: Erin Landis Origin Editorial

The "Addressing Helicopter Research: Journal Policies for Equitable Collaborations" session highlighted the role that scientific journals play in helping address the growing concerns over "helicopter research" (also known as "parachute research" or "parachute science"), which is defined as the act of high-income researchers conducting research in resource-poor settings or with groups who are historically marginalized with little-to-no involvement from those communities or local researchers in the research process or publication of results.¹ The panel comprised speakers representing both the researcher and publisher perspective on parachute science.

As the first speaker of the session, James Kigera, MD, MMed, Editor-in-Chief (EIC) of the Annals of African Surgery, shared the results of a readership survey of his journal. Annals readers are predominately African surgeons and academic scientists. Results showed that 50% of respondents had encountered helicopter research, which included unacknowledged contributions of local researchers and community members of study design and data collection, logistical support, and review of results. Dr Kigera cited the disparities of institutional size and income between the visiting and local researchers as the source of this unacknowledged contribution. He offered several solutions to help address helicopter science, including local institutions being mindful in their choice of international partners and having welldefined memoranda of understanding, to ensure local scientists and community members are properly included, consulted, and acknowledged; using ethics boards to ensure the research is monitored; and educating journals on how to detect helicopter research and reject it.

Following Dr Kigera was Margaret Lartey, MBChB, MSc, MPH, deputy EIC of the *Ghana Medical Journal*, who discussed

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a personal experience she had with helicopter science in 2010. At the time, she was the head of the infectious diseases unit at a large teaching hospital in Ghana. Researchers from a New York-based institution were interested in studying the hospital's patients with HIV. These researchers lacked a proposal and clearance by an ethics board but claimed to have been given permission to conduct their research at the hospital by the provost of the college of health sciences (this turned out to be untrue). Study participants were asked to complete a 4–5-hour questionnaire containing more than 200 questions, causing them to be fatigued and frustrated. The researchers refused to shorten the questionnaire. Within 2 weeks, they had left the hospital and returned to New York, at which point they asked Dr Lartey if she wanted to be an author—an offer she declined.

Like Dr Kigera, Dr Lartey offered several recommendations for how research institutions and publishers or editors can address helicopter research. For research institutions in low-to-middle income countries (LMIC), they must be more assertive and insist that proper research procedures are followed by the visiting scientists. Additionally, researchers in LMICs must be empowered to refuse helicopter research. For all countries, regardless of resources, there must be a stronger emphasis on ethics and monitoring bodies to ensure the research is ethically and appropriately conducted. Publishers and editors can develop policies to prevent helicopter research being submitted or published in journals and can also develop screening mechanisms to detect such science. Dr Lartey concluded her presentation by suggesting that the Committee on Publication Ethics should consider designating helicopter research as research misconduct.

George Vousden, PhD, deputy EIC of PLOS ONE, was the next speaker. He explained why PLOS ONE developed a policy on helicopter research—the journal has a global author and reader base, both of which could be affected by helicopter science, and the journal strives to achieve inclusivity, choice, credit, and transparency. Additionally, PLOS ONE published a clinical trial that was conducted without local authors—calls for retraction were made, but because the journal didn't have a policy yet, it was difficult to heed those calls. In researching how other journals addressed helicopter research, PLOS ONE realized that few journals had policies on this issue. Dr Vousden also acknowledged that it's challenging for journals to immediately impact research practices around helicopter science; when a manuscript has been submitted to a journal, the opportunity has already passed to engage with the local community.

In developing its policy, PLOS ONE consulted those affected by helicopter research, as well as representatives from various disciplines, including public health, medicine, and environmental studies, among others. The journal then developed a set of questions that authors complete at the revision stage to help staff and editors detect helicopter research, with the policy² applying when the last or corresponding author is from a different country or community than where the research was conducted. Dr Vousden then gave an example of the policy in action. He shared that the policy has been applied to 2% of submissions in PLOS ONE, authors have responded positively to the policy, and several other journals have since launched helicopter-research policies. Notably, eLife³ adopted PLOS's policy in April 2023. Dr Vousden concluded his talk by explaining that combating helicopter research will take a combined effort of authors, publishers, and funders (Figure).

The final presentation of the session was from Sowmya Swaminathan, PhD, Head of Collaborations & Chair, Springer Nature Research & Solutions DEI Program. Dr Swaminathan explained that the *Nature* Portfolio's commitment to addressing helicopter research stems from the fact that journals can affect change in the research ecosystem. She



Figure. Authors, publishers, and funders will need to collaborate to combat helicopter research.

cited a recent editorial¹ in *Nature* that illustrates the journal's new framework around helicopter science, which is guided by the Global Code of Conduct for Research in Resource-Poor Settings.⁴ This Code of Conduct was developed by TRUST—a European Union-funded project on research ethics and is discipline agnostic, focusing on the values of fairness, respect, and care. The development of the Code of Conduct included consultation with various groups, including funders, policy groups, and research organizations and has been adopted by both funders and research organizations.

Nature Portfolio journals have integrated their guidance into the author and editor workflows, with the goals of increasing awareness, transparency, and improving citation diversity, and inclusion in peer review. Authors are encouraged to include an optional "Inclusion & Ethics Statement" with their manuscripts; the journals provide a set of 10 prompts⁵ drawn from the Global Code of Conduct to help authors with the development of such a statement. Some of the prompts include the following:

- Has the research included local researchers throughout the research process-study design, study implementation, data ownership, intellectual property and authorship of publications?
- Where appropriate, has the study been approved by a local ethics review committee? If not, please explain the reasons.
- Please indicate if you have taken local and regional research relevant to your study into account in citations.

The guidance has been positively received by authors.

The session concluded with questions from the audience around ethics dumping⁶ and the use of $CRediT^7$ to help include authors from local communities.

- Nature addresses helicopter research. Nature. 2022;606:7. https:// doi.org/10.1038/d41586-022-01423-6
- https://journals.plos.org/plosone/s/best-practices-in-researchreporting#loc-inclusivity-in-global-research
- 3. https://elifesciences.org/inside-elife/5f07c933/author-policy-elifeaddresses-parachute-science-to-support-meaningful-collaborations
- 4. https://www.globalcodeofconduct.org/
- https://www.nature.com/nature-portfolio/editorial-policies/ authorship#authorship-inclusion-and-ethics-in-global-research
- 6. https://en.wikipedia.org/wiki/Ethics_dumping
- 7. https://credit.niso.org/

Maintaining Relevance: Strategies to Drive User Engagement with Journal Articles

MODERATORS: Laura A Lander KGL Editorial

Kelly Lenox

Environmental Health Perspectives/National Institute of Environmental Health Sciences/National Institutes of Health

SPEAKERS:

Chirag Jay Patel Cactus Communications Ginny Herbert Frontiers

Christina Nelson Journal of Bone and Joint Surgery

Cathi Siegel American Physiological Society REPORTER: Michele Springer Caudex

Promoting engagement with journal content is essential to maintain relevance in today's competitive environment. As a result, publishers are rising to meet the demand of this new ecosystem.

Co-moderators Laura Lander of KGL Editorial and Kelly Lenox of National Institute of Environmental Health Sciences/National Institutes of Health opened the session by providing a brief background on enhanced publication content and what it can be used for. "Enhanced publication content" refers to content outside of the published article that enhances and promotes the article. Examples include video abstracts, graphical abstracts, audio-visual content, infographics, blogs, plain-language summaries, and podcasts. This type of content can be used to increase visibility, accessibility, and readership; disseminate information on social media; engage with young readers; attract non-scientists, such as educators and policy makers; and increase article impact. Content can be created at the journal level or the organizational level. This session focused on how journals, societies, and publishers handle this type of material to promote engagement with researchers and audiences far beyond an article's original readership.

Ginny Herbert of Frontiers provided some context as to why reader engagement strategies are so important. There are numerous ways to engage with research that won't show in article citations or Altmetric activities. Publishers should delve into what limits reader engagement, both

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for researchers and the public. Ginny proposed building a "reader engagement roadmap," which will help publishers identify target audiences, understand existing gaps and attitudes, and select relevant strategies for filling these gaps. Ginny used Frontiers for Young Minds¹ as an example—this initiative promotes science for kids, edited by kids. However, a different strategy would likely be needed in order to engage with clinicians or policy makers.

Next, Cathi Siegel spoke about some ways the American Physiological Society (APS) drives engagement. One example is a graphical abstract, which is a visual summary of the main findings of an article. It is a single, concise, informative picture that allows the reader to quickly understand the main takeaway of an article, regardless of whether or not the reader has a background in science. A graphical abstract can be a brand-new image or a repurposed figure from the article. Graphical abstracts appear in PDF ahead of print, and the final version appears at the beginning of the HTML version of an article. They also show up in the table of contents when readers browse an issue. Graphical abstracts were slowly implemented 2-3 years ago and are now required by some APS journals but available for all APS journals. Due to their layout and design, graphical abstracts are a great way to promote an article on social media.

APS also offers the Spotlight Cover Program.² Authors are invited to submit artwork for this program when they upload their revised manuscript. A limited number of images are chosen, and there is a fee to participate in this program. The cover appears on the journal webpage with a direct link to the article, appears on the article page, and serves as the monthly issue cover for the journal. Spotlight covers should be colorful and engaging, have minimal text but enough scientific information to entice a reader to learn more, be original and unpublished with no trademarked or copyrighted images, and be scientifically accurate and visually appealing. APS promotes these covers by posting the artwork on their social media channels and encourages authors to do the same. Data have shown that articles featured under the Spotlight Program are cited and downloaded more frequently than those not in the program.

Siegel also spoke about first author highlights, which is a new feature that elevates the profile of young up-andcoming authors.



Figure. Statistics for increased readership, engagement, and impact for articles published with an alternate format (provided by Cactus Communications).

Christina Nelson then spoke about ways that the Journal of Bone and Joint Surgery (JBJS) drives user engagement. JBJS has a media section on their homepage³ that is used to house videos, podcasts, infographics, news, and audio in one place. The Editor-in-Chief is responsible for picking which articles to feature—typically, the journal will partner with a vendor to produce 2 video summaries and 3 infographics per month. The authors have enjoyed this process and appreciate having their work highlighted in different formats.

JBJS Author Insights videos are generally 2–3 minutes long and are provided by the author. The podcasts "Your Case Is on Hold" and "OrthoJOE" are relatively new, but have been gaining listeners. JBJS also offers OrthoBuzz, a blog designed to keep readers informed of new literature, and OrthoCorps, an audio archive of stories. There is also an audio app that provides a collection of articles read in entirety by qualified med students. All these initiatives are showcased on social media by the JBJS marketing department. Impact is measured by checking subscription numbers, sales generated from emails, and number of listens.

Up next, Chirag Jay Patel discussed how Cactus Communications, a scientific communications/technology company, works with other organizations to generate and amplify content in order to drive engagement. Cactus offers a science-driven approach to communicating research and solutions. They help transform research into content that can be consumed by a wide range of stakeholders as Chirag points out, there is a never-ending amount of content published, so it's important to make yourself stand out (Figure). Cactus has worked with *Neurology* to help drive engagement by transforming articles into short-form articles, which are 250- to 300-word summaries of lengthy articles that allow readers to stay up to date with new content. Additionally, Cactus has worked with JBJS and the Royal Society of Chemistry on infographics and video summaries.

Patel also cited a 3M survey⁴ that indicated the public's trust in science is increasing. Currently, interest in science is high, making it all the more important to drive user engagement and disseminate as much information as possible to as many people as possible, opening the borders of scholarly publishing far beyond the initial intended audiences.

- 1. https://kids.frontiersin.org/
- 2. https://journals.physiology.org/spotlightcovers
- 3. https://www.jbjs.org/
- 3M. 3M state of science index 2022: global report. [accessed August 7, 2023]. https://multimedia.3m.com/mws/media/2183175O/3mstate-of-science-index-sosi-2022-global-report.pdf.

Radical Sharing: An Approach to Knowing Your Committee and Grounding Diversity Work

Amy Ritchie Johnson, Leonard Jack Jr, Sumi Sexton, and Peter J Olson

The CSE Diversity, Equity, Inclusion, and Accessibility (DEIA) Committee brings together CSE members seeking to collaboratively implement equitable actions within the organization and generate DEIA best practices and resources that other members can use within their journals and/or organizations.1 A main goal of the CSE DEIA Committee, and many such committees among other organizations, is to create (because they often do not already have) diversity among membership and programming, particularly panelists and presenters. With every goal toward DEIA our committee has outlined, the same roadblocks come up: How can we know the diverse aspects of any given individual? How can we know what underrepresented groups they identify with? Or what injustices they have encountered? You may or may not be able to look at a person and see a characteristic that shapes or informs their perspective, as there are so many invisible diversities. In corporate and academic culture, highlighting your uniqueness may not always be encouraged. It means to feel vulnerable, potentially overlooked for promotion, or treated unfairly due to subtle or overt prejudice.

Laying the Groundwork

As our committee recognized this roadblock across our efforts, and not having solutions yet for data collection in terms of garnering new members or inviting diverse

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panelists, we realized we needed to start on the ground with our own committee members by answering: Who are we as individuals? Why are we here? To get us started, we engaged in an exercise that highlighted general similarities and differences, such as what coast we live on, whether we have ever traveled outside the United States, and the like. This exercise was good because it was not about business, but rather about team building. It showed us that to get where we want to go—knowing what diversities are at the table—we would need to find a way to go deeper, to be open with one another, and to show more than our professional selves.

After some discussion about whether the committee as a whole thought we should make this effort, 3 gettingto-know-you exercises were put forth for everyone to read over and consider. As a group we discussed the exercises, pointing out strengths and weaknesses of each and coming to a consensus that we would like to go ahead with one of them. Three committee members met to discuss how to tweak the exercise for our particular context and how best to approach implementing the exercise together.

Implementing a DEIA Team-Building Exercise

Emerging DEIA best practices are becoming increasingly important to promote actions that advance diversity of disciplines, racial and ethnic diversity, institutional diversity, interdisciplinary fields, sex and gender diversity, geographic diversity, and linguistic and cultural diversity.¹ According to Sense to Solve,² radical collaboration can bring together people from diverse disciplines with differing perspectives, backgrounds, competencies, and approaches to help with a task. Sharing life experiences among committee members helps to make the charge of the CSE DEIA Committee more relevant and real; it is moving the mission of the committee from theory to reality to practice.

Diversity in ideas, backgrounds, cultural values, and goals may lead to reluctance to share experiences.³ Therefore, great care was taken to identify an exercise that would

promote committee adhesion, bonding, and trust. We started by establishing ground rules to create a safe space in which committee members could share backgrounds and experiences that have played vital roles in shaping their DEIA-related worldviews. Committee members were asked to practice active listening, show empathy for differences, look for common ground and understanding, and help maintain a safe space for sharing that fostered respect and growth.⁴⁻⁶

In addition, the exercise was implemented and facilitated with team-building best practices in mind. Research in team building indicates that compelling and supportive environments are needed for effective collaboration.⁷ Creating such an environment can yield substantial returns.³ Effective team building within the context of DEIA requires those engaged to feel that their concerns, hopes, and input will not only be heard but also be strategically acted on to elicit organizational change. Thus, while DEIA-related team building should be rooted in building trust, it does not occur instantaneously.⁴

The willingness of any group to advance DEIA best practices requires a commitment to be vulnerable and take risks through sharing and collaborative goal setting. The exercise being used by the CSE DEIA Committee to achieve this aim involves asking committee members to reflect on the statement: *Think about the most defining moments in your life. What is one such defining moment that has shaped your perspective related to DEIA*?⁸ Each person is then invited to share this defining experience with the committee, if comfortable doing so. After the perspective of the committee opens the floor for questions or comments. The defining moments and stories have varied and occurred during different life stages and in various settings, but they were all impactful on many levels.

Engaging in Sharing

Some resistance to the exercise can be expected. Not everyone has shared or will. A few volunteered from the start, and others are trickling in meeting by meeting to share their own self-identification, experience, and/or defining moment that brings them to this work of advocating for and crafting a more diverse and equitable industry.

The first time we convened to share, we devoted the whole meeting to the exercise. Four members shared that morning, 10–15 minutes each, and it was emotionally galvanizing and draining. Immediately we felt closer to one another. We were thawing the ice of our professional personas so we could more efficiently and truly sustain our committee goals. Thereafter, we decided to start each monthly meeting with one person sharing and then

following up with the regular agenda. This approach has evolved, like the rest of the process, out of willingness and creativity. The result is a slower and more thorough practice of building solidarity and understanding among committee members, while also sticking to the nuts and bolts of getting things done.

Almost every person who has shared themselves in front of the committee has started out by acknowledging their own fear and discomfort. It is undeniably humbling both for the person speaking and for listeners. We know we are seeing one new part of each person, not all parts; 10 minutes allows for much, yet it is only the tip of the iceberg. In doing DEIA work, we must recognize the intersectionality present for each of us. Intersectionality is a concept created by scholar Kimberlé Williams Crenshaw to express, for instance, how a person can be African American, a cisgender woman, and have a disability, and that these experiences of marginalization overlap.9 In our process of sharing, our committee has additionally come to understand how connection to loved ones who experience injustice is another important facet of our sense of selves and why we work to end racism, ableism, homophobia, and other forms of harm.

Insights and Takeaways

Team-building research indicates that exercises like the one undertaken by the CSE DEIA Committee can help individuals feel more comfortable addressing matters that can be uncomfortable, sharing their ideas, and improving problemsolving skills.⁸ With each shared experience, the CSE DEIA Committee is building its capacity to collaborate on current and future endeavors that require greater attention to being sensitive and respectful to culture or group dynamics. As a result of this ongoing exercise, committee members can also take insights and processes around effective DEIA-related team-building tenets back to their respective journals, organizations, and interpersonal relations.

Testimony from participating committee members underscores the value of the process:

"It was difficult working up the courage to share, but it was empowering to allow others the opportunity to learn more about me and why aspects of my life experience influence my interest and commitment to advance the goals of the CSE DEIA Committee."

"In the professional world, there is often an implicit threshold that separates our professional selves from our personal selves. Creating a safe environment in which we are able to remove that barrier and openly merge the two selves has nurtured a deep and authentic mutual understanding of one another."



Figure. The tenets and benefits of radical sharing of life experiences.

"After an initial sense of discomfort, I felt relief sharing some of my challenges integrating culturally throughout the years, which I've rarely expressed to others. It was a realization that vulnerability is a source of strength."

"On several occasions the personal stories triggered an intense empathy making me feel instantly connected to the person sharing and so appreciative of the opportunity to collaborate with them through this committee."

After all, just showing up and sharing our personal selves in a professional setting is a courageous act toward

inclusivity. *Merriam-Webster* defines *radical* as "of, relating to, or proceeding from a root." That's the approach the CSE DEIA Committee is taking—radical sharing (Figure). We are starting with ourselves and with each other. We are showing up each month as a group and continuing to find out what lived experience shapes our individual expertise in diversity and how we can employ these strengths to forward the committee's successes.

- Jack L Jr. CSE's Diversity, Equity, and Inclusion (DEI) Committee: celebrating our first year of growth, successes, and future direction. Sci Ed. 2022;45:124–130. https://doi.org/10.36591/SE-D-4504-06
- 2. Sense to Solve. Radical collaboration. [accessed August 11, 2023]. https://www.sensetosolve.com/radical-collaboration/
- Millacci TS. Why team building is important + 12 exercises. PositivePsycology.com. [accessed August 11, 2023]. https:// positivepsychology.com/team-building-exercises/
- McEwan D, Ruissen GR, Eys MA, et al. The effectiveness of teamwork training on teamwork behaviors and team performance: a systematic review and meta-analysis of controlled interventions. PLoS One. 2017;12:e0169604. https://doi.org/10.1371/journal.pone.0169604
- Salas E, Reyes DL, McDaniel SH. The science of teamwork: progress, reflections, and the road ahead. Am Psychol. 2018;73:593– 600. https://doi.org/10.1037/amp0000334
- 6. Hugander P. When trust takes away from effective collaboration. Harvard Bus Rev. 2022. [accessed August 11, 2023]. https:// hbr.org/2022/05/when-trust-takes-away-from-effectivecollaboration
- Zak PJ. The neuroscience of trust: management behaviors that foster employee engagement. Harvard Bus Rev. 2017. [accessed August 11, 2023]. https://hbr.org/2017/01/the-neuroscience-of-trust
- 8. Marano HE, Yusim A. The moments that make us who we are. Psychol Today. 2018. [accessed August 11, 2023]. https://www.psychologytoday. com/us/articles/201807/the-moments-make-us-who-we-are
- 9. Crenshaw KW. The urgency of intersectionality. TED Talks. 2016. [accessed August 11, 2023]. https://www.ted.com/talks/kimberle_ crenshaw_the_urgency_of_intersectionality

Threads: When My Personal and Professional Words Collided, with a Bluesky Detour

Jennifer Regala

In early July 2023, a new social media platform was born. "Let's do this. Welcome to Threads. [flame emoji]" And with that, Mark Zuckerberg sent the very first Thread onto the Interwebs and sparked an immediate sensation. Zuckerberg and his Meta team had done what I had been anxiously awaiting. They launched the first platform that I personally found to be the most like my beloved former Twitter. In a few short days, users from 100 countries flocked to the site.¹

It was in these early days that my mom started texting me: "Jenny! Are you on Threads yet?" "Jenny, what do you think about this new Threads?" She knows I love me some Insta, TikTok, LinkedIn, and Twitter/X. I didn't think I could handle one more platform, but in the name of *Science Editor* research, I couldn't resist the siren call of a sleek new place to gather virtually. I decided to take the plunge and get an account. Also, note that my mom calls me Jenny because that will be important later in the article.

Since its purchase by Elon Musk, Twitter has evolved into what is now known as X. With these changes, the impact that has affected me the most is the exodus of my scholarly publishing soulmates from the platform. I have been struggling to find my professional social media ever since. I have written multiple articles for *Science Editor* at this point about the importance of Twitter to what we do, but my professional interactions with important colleagues had taken a nosedive in some cases and vanished in others. Although I do believe that X still is valuable to disseminating content from our American Urological Association journals, IMHO, it's simply not the same any longer for our professional publishing community.

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So you can imagine my delight when my mom lovingly nudged me onto the platform. Maybe I finally would find the new professional social media home I had been searching for!!

How Do You Get a Threads Account?

It's not as easy as logging into Threads and creating your user account. Before you can have a handle on Threads, you need to be on Instagram. Once you have an Instagram account, you download the Threads account and connect it to your Instagram handle. Once your Threads account is activated, you cannot delete that account unless you delete the associated Instagram account. You are only able to deactivate it. Only in the last week did Meta add a web browser option. It's important to note that Meta is continually updating the user experience, so details about how to use Threads probably will be updated by the time this article is released.

After I figured out how to get an account and operate it, I was ready to run home to my scholarly publishing world. With eager anticipation, I decided to go for it and start Threading (Threadsing?).

Caution: Where Things Got Ooogly for Me

Ooogly is not a word you will find in the dictionary. It's from the Jennifer Regala Dictionary® and is defined as a sensation of vague concern, uncomfortableness, and weirdness in one's inner being.

With the intent of an immediate and glorious reunion with all of my phenomenal publishing buddies the minute I got on Threads, I hopped onto my Instagram account to get launched on Threads.

Annnnnnnnnn that's where the ugly part began. I didn't read the fine print carefully enough. I chose to set up my Threads account through my Instagram account, which is decidedly unprofessional and entirely for my personal use. My handle there is "mommyjennyblog," and I share lots of insider Mommy Jenny day-in-the-life scoop: my four kids, date nights with my husband, my recent adventure to the Barbie movie (GO SEE IT), new pink clothes, you get the picture. I

mean... nothing is BAD. I am very proud of this account, but it does not portray me in the least as some pillar of scholarly publishing knowledge. In fact, I doubt that any of my followers on Instagram, with the exception of my boss, could explain my job to you with 100% assuredness (and yes, I include my wonderful husband, Pete, on that list). And remember I said to pay attention that my Mom calls me Jenny? That's my name for outside of the office. At work, I am Jennifer.

What I quickly learned when I made it to the Threads side is that I could not have a separate Threads handle. It was mommyjennyblog or nothing. What I should have done was set up a NEW Instagram, with a professional-sounding handle, and then made my Threads. There is no chance I could handle ANOTHER Instagram (yes, I manage my dog's personal account, too). I was in too deep.

At this point, I decided to let my personal and professional words collide (Figure 1). If you sign up for this Threads, PROCEED WITH CAUTION. It might be worth it to you to set up a new Instagram so you can keep your personal life separate. And follow me with a grain of salt—you are going to see the full Jenny on Threads! This Threads thing for me feels like I am not following my own advice about considering your social media voice,² but I'm not looking back now.

What Has My Threads Experience Been Like So Far?

I love Threads. It is exactly like 2010 Twitter to meback when the people I saw on the platform were kind, wholesome, educating others, and the vibes were immaculate. I remember tweeting Kurt Warner (yes, the Superbowl-winning NFL quarterback superstar), and he responded and had an entire conversation with me. Another time, I told Carly Rae Jepsen via tweet that I loved her hit song, "Call Me Maybe." She responded personally to thank me and followed me! Yet another time, I mused about how



Figure 1. Welcome to my Threads! Follow me at the incredibly professional handle @mommyjennyblog. Threads is a no-judgment zone, which includes looking the other way when you read my handle name. I look forward to connecting!

much I loved Arby's Horsey Sauce. They wrote to me to ask for my address and sent me a year's supply!

What I am describing is Threads now. I interacted with Slim Jim (yes, the beef jerky company), and they responded to my post and followed me, with Toys R Us (back in business apparently) and Lowes Home Improvement then independently reaching out to me. Lots of Barbie movie tweets, lots of happy kind people, Paris Hilton posting "11:11! Make a wish!" You get the idea.

But are my PROFESSIONAL people on there? Yes, a few of them. For instance, many iconic female urologists are on there, and they post frequently about female urological health. Because I have so many personal followers on the platform, they've started following these urologists, too. My next-door neighbor reached out to me to say she is so grateful to be connected with Dr. Rachel Rubin (@drrachelrubin) because of her informative and compassionate posts about menopause.

And there are a few publishing individuals, but I haven't found everyone yet. As for associations and societies, again some are joining, but not all. And I haven't found any journals effectively using Threads yet. Will this change? Maybe. As of this writing, popular social media scheduling platforms, such as Hootsuite, CoSchedule, and Sprout, do not support Threads. This inability to post to Threads alongside other platforms is a barrier for most busy communications and publications teams and organizations.

Will I stay on Threads? Yes, indeed. I do appreciate the new, unexpected, hybrid personal/professional community I've found. I am uncertain though that it will develop into a significant platform for scholarly publishing. Since the app's launch, the active user count of Threads is down approximately 82%.³ Those numbers seem a bit dismal to me. In the meantime, I will still be lurking. You can find me checking out American Girl's latest posts for a good laugh of the day.

But What about the Platform Formerly Known as Twitter?

I'm still there for professional reasons. There are many scientists and researchers, for instance, who continue to hang on over there and share their good work, publications, and initiatives with the world. Journals continue to share articles in the hopes of increased Altmetrics and even citations to boost their Journal Impact Factor. I check in frequently still each day to keep up with what's going on in the publishing, urological, and scientific worlds. It's simply not as fulfilling and organic of an experience as it once was for me.

Is the Mastadon Extinct (Again)?

Mastodon, an open source software launched in 2016 as a networking platform, came onto my radar in 2022. Many of my professional colleagues seemed to be signing up for it in droves. The urological community even called their presence

there "Mastadong." Alas, I have never met a social media platform I don't understand, but Mastodon was beyond my level of comprehension. I have an account but somehow put myself on some mysterious sliver of that platform where nobody ever seemed to find me. Although many individuals have found fulfillment from Mastadon, I did not and must confess my user handle (forgotten at this point) is collecting dust and cobwebs. Anything that complicated should not be considered social media from my perspective.

Blue Skies Ahead?

I have also started dabbling on the platform Bluesky. Thankfully, I have maintained my professional-ish personna there (Figure 2). I am cautiously optimistic that maybe, finally, I've found everyone who fled Twitter from our scholarly publishing world. Bluesky has a sleek platform that is very reminiscent of Twitter. You do need an invitation from a user to join, and the invitations available are limited. I will keep you posted on how this platform progresses, and I am happy to share invitations (I have only one at the moment) with anyone interested!

Why Does Any of This (Waves Arms Wildly) Matter? And Why Should You Care?

1. Community matters to scholarly publishing. In our recent history, virtual connection became more



Figure 2. When a dear scholarly publishing friend offered me a Bluesky invitation (hi Alexa Colella), who was I to decline? Follow me on Bluesky, @jenniferaregala.bsky.social, and I will follow you back if I remember to check the account.

important than ever when we were all social-distancing during the height of the COVID pandemic.⁴ I argue that social media was a way for all of us to maintain communication when in-person meetings and conferences disappeared. Community is what makes our unique world so special.

- 2. Accessibility to opportunities and content you never would have even known existed is vital to what we do. Without social media, I would not have an eye into conferences I can't afford the time and/or money to attend.⁵ I would not know about resources that provide valuable insights into what I should be paying attention to in my job. As one example, I would not have subscribed to the invaluable newsletter, Journalology, written by James Butcher, if I hadn't learned about it on social media. Pro tip: subscribe at https://journalology.ck.page/.
- 3. Inclusion in so many places in the world that never would have been possible in the past. I argue that I have a seat at so many tables that I never even knew existed because of social media. And I believe it is my responsibility to bring others to those tables. Social media helps me do that.
- 4. Impact! This one is clear. Your voice is heard when you share your thoughts where people are gathered to listen. This matters to your journals, your organization, your constituencies, and most importantly to YOU!

I look forward to your feedback. Where are you hanging out these days on social media? What do you think about Threads, X, Mastodon, and Bluesky?

- Spangler T. Instagram launches Threads, a text-based 'conversation' app, in challenge to Elon Musk's Twitter. [accessed August 30, 2023]. https://variety.com/2023/digital/news/ instagram-threads-launch-twitter-competitor-1235662171/amp/
- Regala J. Putting your best voice forward: considering voice and style in your social media posts. Sci Ed. 2021;44:27–28. https://doi. org/10.36591/SE-D-4401-27.
- Fung B. Threads user count falls to new lows, highlighting retention challenges. [accessed August 30, 2023]. https://www.cnn. com/2023/08/03/tech/threads-user-count-falls/index.html
- Regala J. Social media in a pandemic: virtual connections while social distancing. Sci Ed. 2020;43:63–64. https://doi.org/10.36591/SE-D-4302-63.
- Regala J. No mo' FOMO: using social media to avoid missing that conference after all. Sci Ed. 2020;43:98–99. https://doi. org/10.36591/SE-D-4303-98.

Title Race

Stacy L Christiansen

In the ever-expanding universe of scientific publication, journals and other media are constantly vying for clicks and eyeballs in the competition for reader attention. While a variety of tools and strategies can be used to lure the reader in, one of the first and most important is the title. It's often what someone first sees, and possibly it's the only thing they see.

That begs the question then: What kind of titles get those prized clicks and downloads?

Try this title on for size: "2013 Update of the 2008 American College of Cardiology Recommendations for the Use of Disease Modifying Angiotensin Receptor Blockers in the Treatment of Post Cardiac Myocardial Infarction and the Effects of Biological Markers Such as TERM and GAS with the Congruent Treatment of Atorvastatin and Carvedilol at Nighttime but Not in the Morning." (A whopping 344 characters including spaces.)

Conversely, what does this title tell you? "DNA."

Clearly there needs to be a balance between the clickbait terseness of a single word and a title of excruciating granular detail.

Wanting to determine what the ideal title length might be, I looked around for some research on the topic, which turned out to be a bit sparse.

A study¹ published in 2015 analyzed the 20,000 most cited scientific papers per year from Scopus between 2007 and 2013 (N = 140,000). The authors concluded that papers with shorter titles receive greater numbers of citations. When citations were adjusted for the journal in which the paper was published, evidence for the relationship between title length and citations was reduced. The authors also noted that journals that publish papers with shorter titles tend to receive more citations per paper.

A commentary² on the 2015 paper noted: "My working theory is that perhaps shorter paper titles are easier to read and easier to understand," thus attracting wider audiences and increasing the likelihood of a citation, according to lead

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author Adrian Letchford, a data scientist at the University of Warwick in Coventry, UK.

An older study³ analyzed 6 PLOS journals in 2007 (2172 articles). The authors found that articles with interrogative titles were downloaded more but cited less, longer titles were downloaded less than shorter titles, and downloads and citations were correlated. The authors also concluded: "Most titles appear to be attractive but not informative, or informative but not attractive."

One scientific editor noted⁴ that "the traditional recommendation from manuals on scientific writing and from academic publishers is that 10-12 words is about right" and "an efficient title is one that maximizes the ratio of the information communicated to its length."

However, not all research pointed to brevity as the best strategy. In a study of 22 arbitrarily chosen English-language journals, 9031 articles published in 2005 were retrieved from the citation database Scopus. The 2008 journal impact factors of these 22 journals were also retrieved. The study authors analyzed the titles and citations, concluding that longer titles were associated with higher citation rates. This association was more pronounced for journals with high impact factors.⁵

Looking for more guidance on the topic, I turned to the instructions for authors of some leading medical journals. The results were not uniform, although the trend, as in the research I found, was for brevity:

- New England Journal of Medicine: A ballpark character count of 75–80 characters and spaces
- Annals of Internal Medicine: Title should be concise (15 words or fewer)
- Journal of Clinical Oncology: A succinct title, no longer than 175 characters (including spaces)
- *Circulation Research*: No more than 80 characters in length, including spaces; consider including a key phrase within the first 65 characters

At JAMA and the JAMA Network, we settled on recommending 100 characters (with spaces) for research and long reviews, and 60 characters for shorter pieces.⁶

Ultimately, for the title to do its job of inviting readers in, it's important for it to be concise, specific, and informative and contain the key points of the work. This will also help the title be discoverable by search engines and understandable to those scanning reference lists.

Is There Gender Equity in Science Editing?

Ilke Coskun Benlidayi



Gender inequity has plagued scientific editing and publishing from the beginning, but there are signs of slow improvement. Over time, the percentage of women serving in leadership positions at scientific journals has increased.¹ However, there is still underrepresentation of women in the field of publishing as authors, editors, and reviewers.²

In terms of authorship, the inequity is apparent, particularly in last authorships and in fields such as science, engineering, technology, and mathematics.² In terms of editorship, the issue is more apparent in editor-in-chief (EIC) positions. Gollins et al.¹ analyzed previous and current

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EICs of 25 dermatology journals. The results revealed that less than 19% of EICs were female, and moreover, 45.8% of journals had never had a female EIC, either. With regard to the journals that had a female EIC (n = 13), it was only after the year 2000 that 61.5% selected their first female EIC.¹ A recent study by Liu et al.³ evaluated the gender of editors from more than 10,000 journals and 15 disciplines over 5 decades. Percentages of women among editors and EICs were 14% and 8%, respectively.³ Lin and Li⁴ analyzed 68 top psychology journals in 10 subdisciplines and found that the percentage of female editorship differed across subdisciplines, scholarships, and geographic regions. The ratio of female editorship was lower in method journals when compared to empirical and review journals and higher in North America than in Europe.⁴ Wang et al.⁵ further identified that journal impact factor did not have a significant effect on gender representation in editorial boards.

Gender inequity on editorial boards has inevitable consequences in terms of scholarly publishing. For

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instance, underrepresentation of female editors may lead to a consideration that the journal is not open to all authors, which may eventually discourage women from participation in science.³ Besides, female scientists would miss out on the benefits of editorial board membership (e.g., opportunities for intellectual growth and networking), which may in turn interfere with their career development.⁶

There is now an effort to ensure diversity in workplaces and teams, but this requires a systematic change. Every individual should be considered in an equal manner while making policy changes and giving promotions.⁷ Monitoring gender diversity in editorial boards, providing a vision, and setting a plan can pave the way for a change in gender diversity in science editing.8 Targeting gender balance in the academic arena would be of benefit. As an example, a cross-sectional study based on data from European League Against Rheumatism scientific member societies in 13 countries showed that there were gender differences in career progression in academic rheumatology. The number of women in academic rheumatology was lower than that in clinical rheumatology. Moreover, women tended to be under-represented in senior roles in academia. Therefore, inducing gender-equitable career advancement in the academic arena is of utmost importance.9 Some countries have founded women associations in rheumatology. The aim of these associations is to support the education and advancement of women in the field of rheumatology.¹⁰ Inequity can be reduced, and identifying the potential causes of gender imbalance is a crucial step to address the barriers that result in inequities and to move forward in science.11

References and Links

- Gollins CE, Shipman AR, Murrell DF. A study of the number of female editors-in-chief of dermatology journals. Int J Womens Dermatol. 2017;3:185–188. https://doi.org/10.1016/j.ijwd.2017.03.001
- Pihno-Gomes A-C, Woodward M. How long are we going to accept stark gender imbalances across the publishing system? Sci Ed. 2022;45:114-117. https://doi.org/10.36591/SE-D-4504-01
- Liu F, Holme P, Chiesa M, AlShebli B, Rahwan T. Gender inequality and self-publication are common among academic editors. Nat Hum Behav. 2023;7:353–364. https://doi.org/10.1038/s41562-022-01498-1
- Lin Z, Li N. Contextualizing gender disparity in editorship in psychological science. Perspect Psychol Sci. 2022;18:887–907. https://doi.org/10.1177/17456916221117159
- Wang A, Dunlop R, Allavena R, Palmieri C. Gender representation on journal editorial boards in the field of veterinary sciences. Res Vet Sci. 2022;148:21–26. https://doi.org/10.1016/j.rvsc.2022.05.001
- Fox CW, Duffy MA, Fairbairn DJ, Meyer JA. Gender diversity of editorial boards and gender differences in the peer review process at six journals of ecology and evolution. Ecol Evol. 2019;9:13636– 13649. https://doi.org/10.1002/ece3.5794
- Sorenson MS. Diversity in the publishing workplace—what can we do to make systematic changes at the top? Sci Ed. 2023;46:24–26. https://doi.org/10.36591/SE-D-4601-10
- Metz I, Harzing A. An update of gender diversity in editorial boards: a longitudinal study of management journals. Personnel Rev. 2012;41:283–300. https://doi.org/10.1108/00483481211212940
- Ovseiko PV, Gossec L, Andreoli L, Kiltz U, van Mens L, Hassan N, van der Leeden M, Siddle HJ, Alunno A, McInnes IB, et al. Gender equity in academic rheumatology, current status and potential for improvement: a cross-sectional study to inform an EULAR task force. RMD Open. 2022;8:e002518. https://doi.org/10.1136/rmdopen-2022-002518
- Piantoni S, Sakellariou G. Editorial: women in science—rheumatology 2021. Front Med (Lausanne). 2022;9:1016388. https://doi.org/10.3389/ fmed.2022.1016388
- 11. Mahmood SN, Blanco I. The road to equity for women in academic rheumatology. Nat Rev Rheumatol. 2020;16:669–670. https://doi. org/10.1038/s41584-020-00517-7

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- 1. Letchford A, Moat HS, Preis T. The advantage of short paper titles. R Soc Open Sci. 2015. https://doi.org/10.1098/rsos.150266
- Chawla DS. In brief, papers with shorter titles get more citations, study suggests. Science. 2015. https://doi.org/10.1126/science.aad1669
- 3. Jamali HR, Nikzad M. Article title type and its relation with the number of downloads and citations. Scientometrics. 2011;88:653-661. https://doi.org/10.1007/s11192-011-0412-z
- Foster DH. Long, short, and efficient titles for research articles. OUPblog. September 4, 2018. [accessed July 27, 2023]. https://blog.oup.com/2018/09/efficient-titles-research-articles/
- 5. Habibzadeh F, Yadollahie M. Are shorter article titles more attractive for citations? cross-sectional study of 22 scientific journals. Croat Med J. 2010;51:165–170. https://doi.org/10.3325/cmj.2010.51.165
- JAMA Instructions for Authors. Last updated July 14, 2023. [accessed July 27, 2023]. https://jamanetwork.com/journals/jama/ pages/instructions-for-authors#SecTitle



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