SCIENCE EDITOR

A Publication of the Council of Science Editors

In this issue

- CHORUS – Public Access to Scholarly Research
- More Annual Meeting Reports and Research Papers
- 2014 Annual Meeting Program and Short Course Previews

WINTER 2014 • VOLUME 37 • NUMBER 1

www.CouncilScienceEditors.org

VIEWPOINT

ARTICLES

ANNUAL MEETING REPORTS

FEATURES

DEPARTMENTS

CSE NEWS

Cover image: This detailed mosaic image of the Orion Nebula was created by the Hubble Space Telescope team in 2006 after 105 telescope orbits. Created by NASA, Space Telescope Science Institute/ESA, and the Hubble Space Telescope Orion Treasury Project Team. (hubblesite.org/newscenter/newsdesk/archive/releases/2006/01)

MIX
Paper from responsible sources
FSC® C006300
www.fsc.org

Science Editor Online

Viewpoint

The Time Has Come…

"The time has come," the Walrus said, "to talk of many things "(Lewis Carroll, from *Through the Looking Glass and What Alice Found There*, 1871).

It's time again to talk about the "many things" that are changing the face of scholarly publishing. This issue of *Science Editor* and the one to follow address a plethora of continuing and new initiatives in scholarly publishing, including facets of emerging technologies, increasing global reach, tighter editorial standards, and growing attention to ethical issues.

We begin this issue with an article on the success and growth of the African Journal Partnership Project, which is supported in part by CSE. Other pieces touching on international efforts include the annual meeting reports on translations and recent open-access mandates in Europe, an article on developing medical writing programs in South Korea, and a report on the Seventh International Congress on Peer Review and Biomedical Publication, which was held in September 2013.

This issue contains two peer-reviewed research articles that are based on posters presented at the 2013 annual meeting. The first addresses the question of trade-offs encountered when journals publish supplemental online content, and the other describes how data gathered during the peer-review cycle influenced the behavior of the editors of a group of scientific journals.

The research articles are followed by commentaries on the new and continuing initiatives CHORUS and EQUATOR (read these reports to learn more; hint: they are not related to singers or to an imaginary line equidistant from the north and south poles). Other articles focus on publication ethics (two annual meeting reports and the Ethical Editor column), and there is a book review on the history of paper.

Finally, you'll find articles containing information on the program and short courses to be offered at the 2014 CSE annual meeting, which will be held in San Antonio in May.

Patricia K Baskin
Editor-in-Chief, *Science Editor*

Look forward in the next issue to articles on ORCID, CLOCKSS, mentoring peer reviewers, moving journals online, semantic tagging, the Physician Payments Sunshine Act, a new citation scheme, developing a social-media strategy, and more. The world of scholarly publishing is changing quickly, and the time has come to talk of these things!

African Journal Partnership Project Thrives

Participants in the ninth annual meeting of the African Journal Partnership Project at the Medical College of Ghana in Accra, Ghana, April 2013.

Annette Flanagin

Editors and supporters of the African Journal Partnership Project (AJPP) met in Accra, Ghana, in April 2013. The themes of this ninth annual meeting were to strengthen capacity building and sustainability of the journals, improve the use and management of new technologies, and raise the visibility of African science and medical journals. The group welcomed two new journal members: *Annales Africaines de Médecine* in the Democratic Republic of the Congo and the *Sierra Leone Journal of Biomedical Research*. The editors of those two journals joined their

ANNETTE FLANAGIN *is executive managing editor of* JAMA *and codirector of the African Journal Partnership Project.*

colleagues from six other African journals (*African Health Sciences, Ethiopian Journal of Health Sciences, Ghana Medical Journal, Malawi Medical Journal, Mali Medical with Environmental Health Perspectives,* and *Medical Journal of Zambia*), northern partner journals (*Annals of Internal Medicine, BMJ, Environmental Health Science, JAMA, Lancet,* and *New England Journal of Medicine*), and supporters from the National Library of Medicine, the Fogarty International Center, Kaufman Wills Fusting & Company, the Network of African Medical Librarians, Ovid Technologies/Wolters Kluwer Health, SPi Global, Thomson Reuters/Scholar One Manuscripts, and the Council of Science Editors. Much progress has been made: each of the journals is now publishing online, and most are included in PubMed,

African Journals Online, and other publicly accessible databases. The journals are improving their services and access for authors and readers and expanding their presence and influence locally and internationally. Additional information and updates on the African journals are available on the AJPP Web site, *ajpp-online.org/index.php.*

In September 2013, funding for the partnership project was renewed by the US National Library of Medicine and National Institutes of Health. The group plans to meet again in conjunction with the CSE annual meeting in San Antonio, Texas, in May 2014. Tom Goehl has retired as one of the project's codirectors. Steve Morrissey (*New England Journal of Medicine)* has joined Annette Flanagin (*JAMA*) and David Ofori-Adjei (*Ghana Medical Journal*) as a codirector.

Editorial Burden and Reader-Perceived Value of Supporting Online Materials

Sheila M Cherry

Abstract

Background: Anecdotal evidence indicates that supporting online materials (SOM) may present an increased editorial burden for hosting journals. This study tested the hypothesis that SOM present an increased editorial burden that may not be outweighed by reader-perceived value.

Methods: Separate online questionnaires regarding aspects of SOM were distributed to managing editors via e-mail and to readers of peer-reviewed life-science and medical journals via e-mail, social media, and online forums. Editors were surveyed with respect to their journals' guidelines, the perceived impact of SOM on editorial burden and publication effectiveness, and methods by which readers can access SOM. Readers were asked how often and why SOM are accessed, their perceived value, and preferred methods of access. Survey results were analyzed by using SPSS, version 21.0.

Results: Seventy-nine editors were invited to participate. Of the 30 respondents, 26 (87%) worked for journals that publish SOM. Of the 26, editors who indicated that SOM have a somewhat or very important impact on editorial burden were 2.25 times more likely to work for journals that have published guidelines or limits for SOM than editors who did not so indicate. Similarly, editors at journals that typically edit or request changes in SOM were more likely to indicate a more important impact on editorial burden than editors at other journals. However,
editors who rate SOM as somewhat or very important for editorial burden were less likely than other editors to rate SOM as having a somewhat or very important impact on their journals' effectiveness as a publication. The reader survey received 105 responses; 65% were from academic employees. Industry employees were nearly 3 times more likely than academic employees to access SOM and 1.4 times more likely to rate SOM as highly valuable; government employees were half as likely as academic employees to access SOM or to rate them as highly valuable. Readers who access SOM frequently or always were significantly more likely to rate SOM as highly valuable than readers who access SOM occasionally. Finally, readers who frequently or always access SOM were more likely to access SOM through links embedded within PDFs than through other methods.

Conclusions: Journal editors perceive SOM as an additional editorial burden even when guidelines or limits are imposed. However, the burden appears to be merited according to reader-perceived value. The use of more stringent guidelines and publication of SOM on author-hosted sites are recommended for consideration by journals that publish such materials.

Introduction

Academic journals are increasingly publishing peer-reviewed articles online. Online publishing escapes the constraints of traditional print media in that more content can be accommodated. Although print articles are typically limited in numbers of pages or words and of tables or figures, content published only online—often referred to as supplemental or supporting online materials (SOM)—does not have to be limited in the same way, because the costs of publishing online are lower.[1]

Rapid increases in the publication of SOM in recent years have led to some important observations.[2] In particular, the practices for publishing SOM vary widely. Some journals do not accept any SOM. Others have relegated key pieces of an article (such as the methods) to the online publication, and nearly all articles published by some journals have accompanying online-only content. Some journals that accept SOM have strict guidelines as to the types of content that can be included (for example, file-size limits and numbers of additional figures); others do not impose any limits on SOM. The variety of practices has catalyzed recent efforts to produce guidelines for publishers in accepting SOM.[3]

No data exist to describe the frequency of use of or the importance attached to SOM by journal readers. There are also questions about the rigorousness with which SOM are scrutinized by editors and peer reviewers. The incorporation of SOM into a journal's publishing repertoire increases not only the content published and managed by the journal but probably the workload of journal staff—who must receive and process the materials ahead of publication, manage and maintain the electronic resources, and incorporate SOM into production workflows—and peer reviewers. These issues highlight possibilities for standardization in how SOM are accepted and incorporated into publications; they also expose gaps in the data needed to support the continued publication of these materials.

Our study sought to determine whether readers attach value to SOM that warrants the potential editorial burden and whether SOM present a perceived increase in work burden for editors of peer-reviewed academic journals.

Methods
Study population
A cross-sectional survey involved the electronic distribution of two separate online questionnaires. All responses were submitted

SHEILA M CHERRY *is president and senior editor at Fresh Eyes Editing, LLC, Reynoldsburg, Ohio.*

anonymously, but Internet protocol (IP) addresses were recorded to determine countries of origin. One questionnaire was intended for readers of peer-reviewed academic journals in the life, medical, and physical sciences. A hyperlink to the online questionnaire was initially disseminated through e-mail and social media to science professionals, particularly in academic research. However, later "viral" sharing of the hyperlink through participants' contact lists, social networks, and science-related message boards prevented determination of the response rate for the reader survey; 105 persons completed the questionnaire.

The second questionnaire was disseminated to managing editors of peer-reviewed academic research journals in the life, medical, and physical sciences. Seventy-nine managing editors were identified from journal directory listings and contacted via e-mail with a hyperlink to the questionnaire; 30 managing editors completed the questionnaire.

Surveys

The two questionnaires were designed and hosted using Survey Monkey (*www.surveymonkey.com*). Each questionnaire contained 10 or fewer multiple-choice questions that were designed to collect participants' demographic information (position and sector) and perceptions regarding SOM without introducing bias.

The questionnaire for the reader survey comprised the following 10 questions:

1) Please describe your current career level (undergraduate student/graduate student/postdoctoral scholar/instructor/researcher/assistant professor/associate professor/professor/other, please specify).
2) Please describe your place of employment (academic institution/industry/government/other, please specify).
3) Please describe your field of expertise (biological sciences/materials sciences/computer sciences/other, please specify).
4) On average, how many peer-reviewed research articles do you read per week (0 / 1–2 / 3–5 / 5–7 / 7+)?

5) On average, what percentage of these research articles do you access online only (ie, not from print editions) (not applicable/none/less than 50%/more than 50%/100%)?
6) If an article states that additional, supporting materials (eg, raw data, databases, code, videos, color photos) are available online, how often do you attempt to access these materials (never/occasionally/frequently/always/other, please specify)?
7) If supporting online materials are available, what is your most likely reason for accessing them (not applicable/material seems appealing in a visual or informational way/material was deemed important by article's authors/material may affect my conclusions about the article/material may have significance for me because it is directly relevant to my field of research)?
8) When attempting to access supporting online material, how often do you find that the links to the material are nonfunctional (not applicable/never/occasionally/frequently/always)?
9) Thinking about the occasions when you have accessed supporting online materials, upon reflection, how valuable (not at all valuable/slightly valuable/somewhat valuable/highly valuable) would you say the materials were to the following: your overall assessment of the article; your conclusions about the article; the contributions of the article to its field; and the contribution of the article to your own research?
10) If supporting online materials are available for an article, what factors would make you more likely to access them; choose all that apply (links embedded in HTML version of article/links embedded in PDF article/centralized access point on journal homepage/other)?

The questionnaire for the editor survey comprised the following seven questions:

1) Are you an employee/editor of a peer-reviewed academic journal (yes/no)?

2) If yes, does your journal publish and/or host supporting/supplemental materials for research articles online (yes/no)?
3) If yes, please estimate what proportion of the manuscripts accepted for publication by your journal (online or in print) include supporting materials to be published online (0–20%/20–50%/50–80%/80–100%).
4) For supporting materials to be published online, does your journal regularly: edit these materials (yes/no); request changes to these materials (yes/no); submit these materials for peer review (yes/no)?
5) Does your journal include guidelines and/or limits for authors on the: content of supporting materials (yes/no); quality of supporting materials (yes/no); quantity of supporting materials (yes/no)?
6) How would you assess the impact of supporting online materials on your journal's: editorial burden; Web hosting burden; overall readership; overall effectiveness as a publication (not at all important/not very important/neutral/somewhat important/very important)?
7) How are readers directed to access supporting online materials (choose all applicable answers: Web address listed within article/hyperlinks at beginning or end of article/hyperlinks embedded at relevant points within HTML text of article/hyperlinks embedded within text of PDF article/centralized access point on journal Web site/other, please specify)?

Statistical analysis

Responses from both questionnaires were independently compiled into a spreadsheet. Survey results were analyzed by using SPSS, version 21.0. Logistic regression was used to determine odds ratios (ORs) with 95% confidence intervals (95% CIs). Rate ratios were calculated by comparing the incidences of responses from the two groups.

Results

Readers were surveyed to determine the frequency with which they use SOM and the value that they attach to them. The reader survey received 105 responses, of

which 104 indicated that the field of expertise was in the life and medical sciences. Most of the 104 respondents identified themselves as "researchers" employed at academic institutions in North America (Table 1). Most indicated that they read an average of three to five peer-reviewed academic articles per week (Fig. 1). Nearly 82% of respondents reported reading at least 50% of those articles online.

When asked how frequently they access SOM that accompany an article of interest, most respondents indicated that they access them "frequently" or "occasionally" (Fig. 2A). The likelihood that a reader accessed SOM occasionally, frequently, or always was associated with the sector in which the reader was employed (Table 2). Industry employees were more likely than academic employees to access SOM (OR 2.79, 95% CI 0.56–13.91), and govern-

Percentage of Respondents (n=104)
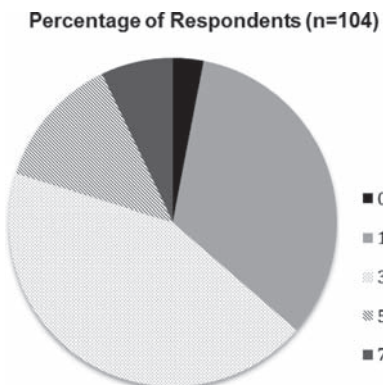
Fig. 1. Self-reported average number of peer-reviewed articles read weekly by life-sciences respondents. Estimated average number of papers is indicated by the shade or pattern of pie slices.

ment employees were less likely (OR 0.41, 95% CI 0.15–1.14).

Readers were asked how valuable (not at all, slightly, somewhat, or highly) they found SOM to be to contributions to

Table 2. Likelihood that Readers Access SOM, by Sector

Sector	Accession of SOM Odds Ratio (95% CI[*])
Academe	Referent
Industry	2.79 (0.56–13.91)
Government	0.41 (0.15–1.14)

[*]CI, confidence interval.
Likelihood of accessing SOM was considered as Occasionally/Frequently/Always answer in Figure 2A (reader questionnaire, question 6).

their own research, to contributions to the field, to their conclusions about an article, and to their overall assessment of the article. Readers tended to rate SOM as highly valuable for contributing to their own research but only somewhat valuable for all the other categories (Fig. 2B). Respondents' employment sector was associated with the likelihood of accessing

Table 1. Respondent Demographics for Reader Survey

Demographic	Number of Respondents (%)
	Total Respondents (n = 105)
Field	
Life or medical sciences	104 (99.05)
Other (such as materials or computer)	1 (0.95)
	Life- or Medical-Science Respondents (n = 104)
Sector	
Academe	68 (65.4)
Industry	10 (9.6)
Government	20 (19.2)
Other (such as nonprofit)	6 (5.8)
Career level[*]	
Professor (full, associate, assistant)	22 (21.2)
Researcher	27 (26.0)
Lecturer or instructor	2 (1.9)
Postdoctoral	22 (21.2)
Graduate or undergraduate student	22 (21.2)
Other	9 (8.7)
Geographic region[*]	
North America	66 (63.5)
Central or South America	1 (0.96)
Europe (including UK)	9 (8.7)
Asia or Pacific	27 (26.0)
Unknown	1 (0.96)

[*]Total percentage exceeds 100.0% because of rounding.
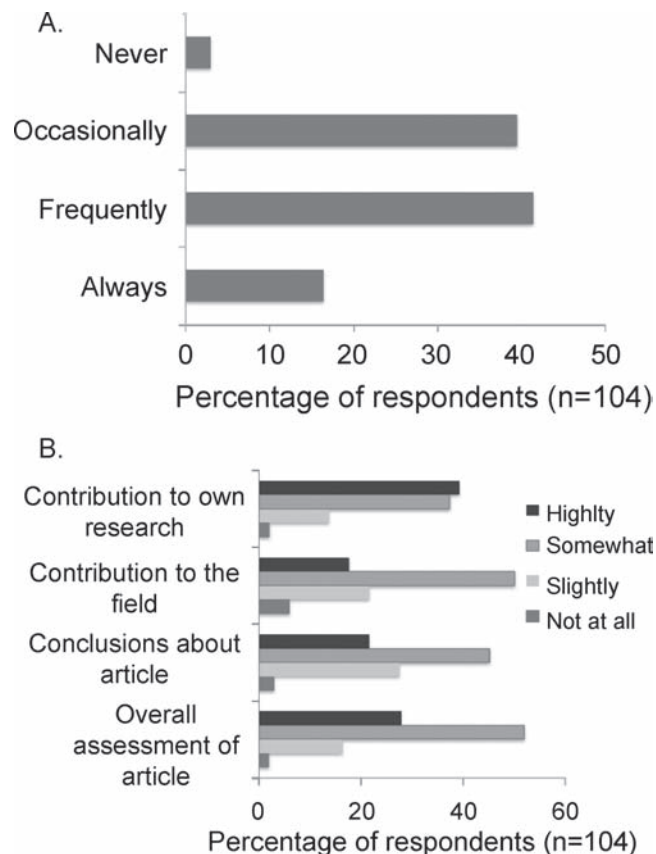
Fig. 2. Readers' perceived accession frequency and valuation of SOM. The 104 life-science respondents indicated A) an estimate of how frequently they access SOM if they are available for an article of interest and B) how valuable SOM are to their assessment of and conclusions about an article and the article's contribution to the field and to the reader's research.

continued

Table 3. Rating of SOM, by Sector

Sector	"Relevant to Field" Rating, Odds Ratio (95% CI*)	"Highly Valuable" Rating, Odds Ratio (95% CI)
Academe	Referent	Referent
Industry	1.38 (0.37–5.16)	1.37 (0.37–5.14)
Government	0.97 (0.35–2.63)	0.52 (0.19–1.45)

*CI, confidence interval.

SOM because of relevance to their field and with rating SOM as highly valuable (Table 3). Industry-based respondents were more likely than academic respondents to access SOM because of relevance to their own field (OR 1.38, 95% CI 0.37–5.16) and more likely to rate SOM as highly valuable (OR 1.37, 95% CI 0.37–5.14).

A rate-ratio method was used to assess whether the preferred method by which a reader accessed SOM was associated with the reader's rating of the value of SOM (Table 4). Readers who indicated that they were more likely to access SOM if hyperlinks were embedded in the PDF version of an article were more likely to rate SOM as somewhat or highly valuable than readers who were more likely to access SOM through links embedded in the HTML document or through a centralized access point (such as a table of contents).

Managing editors were surveyed to determine their journals' practices regarding SOM and their editors' perceptions of SOM as related to their workloads. Of 79 editors invited to participate, 30 editors responded to the questionnaire (response rate, 38%). Of the 30, 26 (about 87%) indicated that their journals published

Table 4. SOM Accession Method Versus Reader-Perceived Value of SOM

Preferred accession method	Somewhat/ Highly Valuable Rating, Rate Ratio
Embedded PDF	Referent
Centralized access point	0.50
Embedded HTML	0.27

Rate of accessing SOM was determined from respondents answering frequently/always for these three methods of accession.

SOM (Table 5). Later responses were analyzed only for editors who worked at journals that published SOM. Most editors indicated that their journals published SOM for fewer than 50% of articles.

Editors were asked later about their journals' practices for handling SOM. Most (about 85%) indicated that their journals typically send SOM for peer review, but less than 50% indicated that authors are typically asked to make changes in SOM, and about 27% indicated that their journal staff edit SOM (Table 5). Few journals appeared to have guidelines or limits regarding the quantity of SOM that can be accepted, and about half the survey journals appeared to have guidelines or limits regarding the quantity and content of SOM.

Finally, editors were questioned about their perceptions of the importance of SOM with respect to aspects of their journals' activities. About 40% of editors rated SOM as somewhat or very important for their journals' effectiveness as publications and overall readership, and 42% rated SOM as somewhat or very important with respect to their editorial burden (Fig. 3). Logistic-regression analysis revealed that editors at journals that did not regularly edit SOM were less likely to find SOM somewhat or very important with respect to the editorial burden than editors at journals that regularly edit SOM (OR 0.7, 95% CI 0.9–5.4; Table 6). Editors at journals that regularly request changes in SOM were more likely to find SOM somewhat or very important with respect to editorial burden than editors at journals that did not request changes in SOM (OR 4.38, 95% CI 0.56–33.95). Editorial burden was perceived as somewhat or very important even when a journal had guidelines or limits regarding SOM (Table 6).

Table 5. Editor Responses Regarding Perceptions of SOM

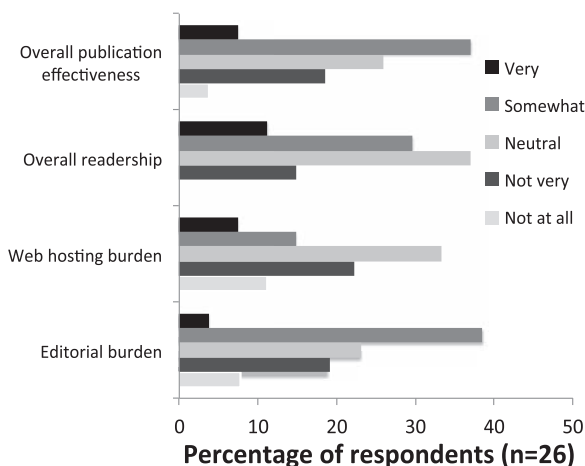| Characteristic	Number of Respondents (%)
Journal publishes SOM (yes/no)	Total Respondents (n = 30)
Yes	26 (87.0)
	Respondents, Journal Publishes SOM (n = 26)
Estimated percentage of manuscripts having SOM	
<20	12 (46.2)
20–50	10 (38.5)
50–80	4 (15.4)
>80	0 (0.0)
Handling by journal (y/n)	
Edits SOM (yes)	7 (26.9)
Requests changes in SOM (yes)	12 (46.2)
Submits SOM to peer review (yes)	22 (84.6)
Journal includes SOM guidelines or limits (y/n)	
Content of SOM (yes)	15 (57.7)
Quality of SOM (yes)	13 (50.0)
Quantity of SOM (yes)	8 (30.8)
Journal-provided modes of access to SOM (multiple answers accepted)	(n = 24)
Designated Web address in article	16 (66.7)
Hyperlinks at beginning or end	8 (33.3)
Hyperlinks embedded in HTML	16 (66.7)
Hyperlinks embedded in PDF	14 (58.3)
Central access point at journal Web site	6 (25.0)

Fig. 3. Editors' perceived importance of SOM. The 26 editors of academic journals that publish SOM indicated perceived importance of SOM for their journals' overall effectiveness as publications, overall readership, Web hosting burden, and editorial burden.

Discussion

Although our study was limited by small samples and requires cautious interpretation, the findings indicate that journal readers in the life sciences and the medical sciences place value on SOM particularly if an article is relevant to their field. Readers' employment sector appears to influence the likelihood that they will access SOM and find them valuable. Thus, reader interest appears to warrant the publication of SOM by academic journals.

In contrast, editors of journals that publish SOM perceive them as having an important effect on their editorial burden. That perception of editorial burden was observed even for journals that have guidelines or limits regarding SOM. At the same time, editors perceive SOM as important to their journals' readership and effectiveness. Therefore, although SOM appear to impose a higher editorial burden on journal staff, the burden may be merited by reader-perceived value of SOM.

The adoption of more stringent and uniform guidelines for accepting and publishing SOM, like those proposed by the National Information Standards Organization and the National Federation of Advanced Information Services,[3] may alleviate the editorial burden by reducing the workload. More detailed studies of reader use of SOM may help to refine guidelines so as to tailor SOM to reader needs and interests. For example, journals may consider relegating some types of SOM to author-hosted sites, thereby reducing the quantity of SOM that editors must handle. Indeed, in 2010, *The Journal of Neuroscience* announced that it was ending its publication of SOM and would permit authors instead to insert a link to author-hosted (and nonreviewed) supplements.[4] Citing exponential growth in the amount of supporting material submitted, the editor-in-chief described the adverse effect on editors' workloads, the burden on peer reviewers, often-inadequate reviews, and rising costs of hosting SOM. A failure to implement strict guidelines may prompt other publications to exclude SOM from their repertoires.

Future studies should expand on the work presented here to develop a clearer picture of both reader value and editorial burden of SOM. For example, more detailed questionnaires may gather specific data on reader characteristics to determine the types of journals that they read (such as medical versus life science) and the specific guidelines that are in place for those journals. A broader survey of publication-related staff may identify specific features of the perceived burden of SOM—such as management of peer review, handling of files, production timelines, and financial costs—to help to refine and implement guidelines to have the largest possible effect. 🔧

Table 6. Editor-Rated Perceived Burden Versus Perceived Importance of SOM

	Characteristic, Odds Ratio (95% CI[*])	
	S/VI# Impact on Editorial Burden	
Journal regularly edits SOM		
Yes	Referent	
No	0.7 (0.9–5.4)	
Journal requests changes in SOM before publication		
No	Referent	
Yes	4.38 (0.56–33.95)	
		S/VI Impact on Journal
Impact on editorial burden	Journal Limits SOM	Effectiveness
Not at all/not very important	Referent	Referent
Somewhat/very important	2.25 (0.19–27.37)	0.25 (0.02–3.04)

[*]CI, confidence interval.
#S/VI, somewhat/very important.

References

1. Collins MP, Berge ZL. IPCT Journal: A case study of an electronic journal on Internet. Journal of the American Society for Information Science 1994;45:771–776.
2. Schwarzman A. Supplemental information: Who's doing what and why. Council of Science Editors Annual Meeting. 2012 May 18–21; Seattle, WA.
3. National Information Standards Organization (US) and National Federation of Advanced Information Services (US). Recommended Practices for Online Supplemental Journal Article Materials. January 2013. Baltimore, MD. NISO RP-15-2013.
4. Maunsell J. The Journal of Neuroscience. Announcement regarding supplemental material. 2010;30(32):10599–10600.

Affecting Editor Behavior with Data: A Case Study

Angela Cochran and Liz Guertin

Abstract

The American Society of Civil Engineers publishes 34 technical journals in all civil-engineering subdisciplines. The society self-publishes more than 28,000 pages a year with a relatively small staff, and thus, the journals' editorial boards were accustomed to acting independently, with little oversight. In the early 2000s, it was common for the time from submission to publication to extend to over 2 years. Basic turnaround-time reports were available but left editors and journal management staff with little detailed information on where bottlenecks were occurring. New reports developed in 2011 and enhanced in 2012 were more specific and helped to achieve faster decision making. This paper serves as a case study of how to affect volunteer-editor behavior by providing detailed reporting. New behavior included increased frequency of logging in to the system, calls to action to subeditors or associate editors, changes in the amount of time given to reviewers, changes in the number of associate editors used, and heightened awareness of nonperforming editors and associate editors.

Introduction

The American Society of Civil Engineers (ASCE) has a rich history of publishing technical content. *Transactions* became journals of the different technical divisions, which have become the individual journal titles that we have today. The modern journals publishing program was formed largely when the society moved from New York to Reston, Virginia, in 1997. At that time, there were 25 journals.

ANGELA COCHRAN *is director, journals, and* LIZ GUERTIN *is manager of journals systems administration of the American Society of Civil Engineers, Reston, Virginia.*

Originally, the publishing program was entirely a paper process in which editors received submissions directly from authors and ASCE staff had little or no control over manuscript processing. A manuscript tracking system, RMTS, was used, and staff attempted to centralize the mailing and coordination of the journals. It was only minimally successful inasmuch as the process still used paper manuscripts and mail.

Reporting from the tracking system was inadequate for determining the amount of time that review was taking, and the editors were still receiving submissions to their own offices. In 2005, ASCE began using Aries' Editorial Manager online-submission and peer-review tracking system. The first journal to use the new system went live in October 2006, and the final one went live in October 2008.

Even with a stronger reporting tool, staffing levels and concentration on streamlining the process still left little time for "managing" the editors and their performance. The tool did, of course, drastically reduce staff processing time for manuscripts and eliminated mailing time.

Turnaround Times

The average time from submission to acceptance is used by authors and readers to determine the quality and relevance of a journal.[1] The perception of immediacy of content varies by discipline. Medical journals, for example, have a need to publish conclusions as quickly as possible, and the material is published and cited almost immediately. Papers in civil engineering hardly reach their peak citations much before 5 years after publication.[2]

In 1992, the ASCE Board Publications Committee decreed that ASCE journals should have less than 5% of papers out for review for more than 6 months. Ideally, all papers were to be reviewed within 90 days (3 months) from submission to final decision. Those goals were not being met

Table 1. Average Time to Final Decision on Papers Published, 2005–2012

Year	Average Time from Submission to Final Decision (months)*
2005	13.7
2006	13.6
2007	13.7
2008	10
2009	9
2010	10
2011	10
2012	9

2007, 2008, 2009: journals launched individually on online manuscript-submission system.

(Table 1) even after the online submission system was introduced. ASCE also had allowed long review and revision times, which stretched out the turnaround times (Table 2).

It is important to note that the chief editors and associate editors are not compensated for their work on the journals. Editors can request financial assistance to cover administrative assistance costs. Associate editors receive no financial support.

Editor Perceptions

When the editors were asked in their board meetings or at the annual ASCE Editors' workshop about the turnaround time, they overwhelmingly reported that slowness was the fault of the reviewers. The editors insisted that 45 days was the appropriate amount of time to give reviewers to conduct an initial review, but the editorial coordinators who were processing manuscripts daily suspected otherwise. More detailed information was needed. Autogenerated reports from the online submission system showing average turnaround times were not specific enough to pinpoint the bottlenecks.

Table 2. Turnaround-Time Expectations

Action	2009 (days)	2013 (days)
Time allowed to respond to reviewer invitation	14	5
Time allowed to conduct first review	45	21–45
Time for authors to complete first revision	60	30–45
Time for reviewers to conduct later reviews	30	15–30

Methods

Editor and Reviewer Performance Report

In August 2011, the online-submission administrator (the second author of this paper) began collecting individual pieces of information on each journal. These can best be described as snippets, and they included

- Staff time—Average days from submission to chief editor (CE) assignment.
- CE time—Average days for CE to assign subordinate or associate editor (AE).
- CE or AE time—Average days from submission to first reviewer invitation.
- Reviewer time—Average days for reviewer to respond to invitation.
- Reviewer time—Average days for reviewer to complete review after accepting invitation.

- AE time—Average days for AE to recommend a decision after all required reviews are received.
- CE time—Average days for CE to render final decision after AE recommendation made.
- Number of late reviews.
- Number of early and on-time reviews.

Adding all those snippets does not yield the average time from submission to first decision. There are overlaps (e.g., time from submission to first reviewer invitation includes staff time and CE-assignment time).

Results

Although the editor and reviewer performance report is not a linear or chronological analysis, it does provide specific information about where the bottlenecks are on a journal-by-journal basis. The report (Table 3) covers January 2011–September 2013. The initial report, presented in 2011, showed that the reviewers were responding to invitations and completing their reviews much faster than expected (4.88 days). However, it also showed the CEs were exceeding the turnaround-time expectations for assigning AEs (6.68 days), and the AEs were not meeting the goals for assigning reviewers (Table 2). The entire average time from submission to assignment of the first reviewer was 20.44 days. Furthermore, once all required reviews were in, the AEs and CEs

were taking a long time to render decisions (17.30 days and 8.82 days, respectively).

Sharing the Reports with the Editors

In September 2011, the initial numbers were shared with the Editorial Board of the *Journal of Environmental Engineering* at its annual meeting. As the editors were discussing the turnaround time, they lamented that the reviewers were taking too much time. The journals director (the first author of this paper) was at that meeting and shared what the initial report stated. On the average, it was taking the CE 13.2 days to assign papers to the AEs. The average time from submission to reviewer invitation was 34.8 days, showing that the AEs were also slow to assign reviewers. It was taking the AEs 18.54 days to make their decision recommendations after all reviews had been submitted. For this journal, the reviewers were given 30 days to complete their initial reviews; on average, the reviews were done in 22.4 days.

The data presented to the editors clearly showed that the bottleneck was with them, not the reviewers, who were performing better than expected. The editors made several decisions at the meeting to decrease their turnaround time:

1. The CE vowed to log into the system more often to assign papers to AEs. The AEs confessed that when they get five or six papers at once, they let them sit;

Table 3. Editor and Reviewer Performance Report for All ASCE Journals, 2011–2013

Time Frame	ASCE staff — Average days from submission to chief editor assignment	Chief editor — Average days for chief editor to assign to associate editor	Associate editor — Average days from submission to reviewer invitation*	Reviewer — Average days for response to reviewer invitation	Reviewer — Average days for reviewer to complete review after accepting invitation	Associate editor — Average days to render decision after required reviews received**	Chief editor — Average days to decision after associate editor decisions received***	First decision — Average time to first decision (based on decisions made in time period)
2011	2.30	6.68	20.44	4.88	31.01	17.30	8.82	112.18
2012	2.21	3.99	19.03	4.08	29.67	16.90	9.07	99.69
2013 (January–September)	1.34	6.46	17.68	3.50	29.52	17.10	8.18	87.60
Difference (2011–2013)	**0.96**	**0.22**	**2.76**	**1.38**	**1.49**	**0.20**	**0.64**	**24.58**

*Includes first two columns.

**The number of required reviews is set to three. Editors can change that number. This time starts as soon as the last review is received.

***Associate editors make a recommendation to the chief editor for most ASCE journals. Chief editors render final decisions.
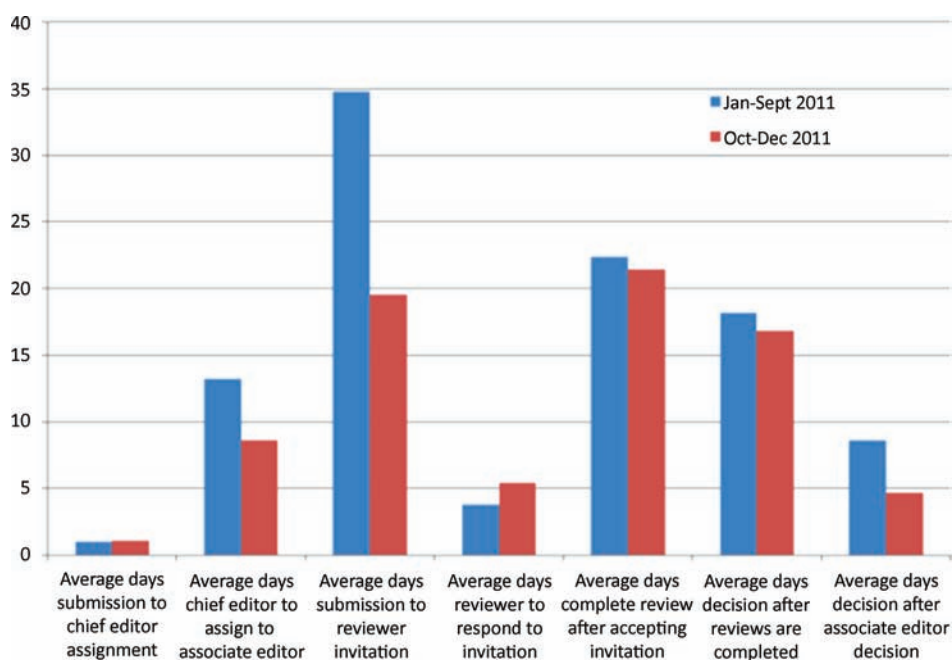
continued

Fig. 1. Performance report for the *Journal of Environmental Engineering,* 2011.

if they were getting only one or two at a time, they felt that they could address them more quickly. This was valuable feedback that the CE needed.

2. The CE made the AEs raise their hands (literally) and pledge to move papers along faster. Asking for a group commitment in light of the performance numbers held them all accountable.
3. The CE requested that the report be regenerated in 3 months to see if there had been improvement.
4. The board decided to decrease the time for completion of reviews to 21 days.

In accordance with the CE's request, the numbers were pulled again in 3 months, and the board did shorten their review times (Fig. 1). The CE reduced his time for assigning papers from 13.2 days to 8.6 days. The time from submission to reviewer invitation dropped from 34.8 days to 19.5 days. The AEs reduced their time to make recommendations from 18.17 days to 16.8 days. The CE reduced his time for rendering a final decision from 8.6 days to 4.7 days. All together, nearly 25 days were shaved from the overall processing time in the span of 3 months. The editors continued to decrease their turnaround times, and times were even better in 2012.

Overall Response to Performance Report

The reports are provided to the editors twice a year: January–June data in July and January–December data in the following January. The editors receive only their own journals' data and the average data for all 34 ASCE Journals.

Initially, although the CEs appreciated the granular data, some were not convinced that they could reduce reviewer time, and others were concerned about putting pressure on their AEs. The CE of the *Journal of Environmental Engineering* shared his experience in reducing the turnaround time on the basis of these data as well.

Some of the editors voiced reluctance to change behavior. Responses included the following:

- Unwillingness to increase pressure on the AEs to perform faster
- Unwillingness to log into the system more often (citing competing priorities)
- Unwillingness to reduce the amount of time given to reviewers

A few changes were made in editorial processing by staff in light of the data. Even for journals that were giving reviewers 45 days to turn in reviews, the average time for a review was 32–38 days. That coincided with automatic reminders in the system. It seemed clear that reviewers were completing their reviews shortly after getting the first reminders. The reminder e-mails were changed so that the first reminder arrived earlier. Over the course of the year, average reviewer time decreased by nearly 1.5 days, and an argument was presented to individual boards that their reviewers were already reviewing in under 30 days. Several editors were then ready to change the review time to 30 days. One journal has decreased the time to 21 days.

Despite their stated reluctance to change, the editors managed to reduce the average time to first decision by 12.49 days in the 7 months after the 2011 editors' workshop (Table 3, 2012 data).

We continued to see improvements in 2012 and 2013. Since the report was created, the average time to first decision has decreased by 24.58 days. Other factors that have played into the decrease in the average time include the following:

- A few new editors who have better performance statistics
- A greater focus on turnaround time by ASCE editorial staff
- Changes in the reminder structures

Other Report Changes

Several reports were designed or tweaked starting in 2012 to highlight the oldest papers for the editors of the journal. The monthly late-list report, showing all papers in review that were more than 90 days old, was typically an unsorted Excel table sent as a PDF. The editors had no ability to sort or play with the data. The report was reformatted by staff, sorted according to how old the papers were, and color coded. An Excel version is now sent to the editors with notes about the papers in most urgent need of attention added to the body of the e-mail, as opposed to just being sent as attachments; this increases the visibility of problem papers and gives the editorial coordinators a better idea of which papers need follow-up.

CHORUS: A Solution for Public Access to Scholarly Research

Howard Ratner

Background

As the first service of the nonprofit CHOR Inc., the Clearinghouse for the Open Research of the United States (CHORUS, *www.chorusaccess.org*) offers an open-technology platform to meet the public-access needs of US federal funding agencies, researchers, institutions, and the public. CHORUS is focused on five principle sets of functions: **identification, access, discovery, preservation,** and **compliance**.

CHORUS was established in response to a US Office for Science and Technology Policy (OSTP) memorandum in February 2013 (*www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf*). The memorandum stated that each federal agency with expenditures of more than $100 million in research and development had to develop a plan to support public access to research, including "results published in peer-reviewed scholarly publications". It called for the establishment of public–private partnerships to facilitate access, and it encouraged leveraging existing infrastructure rather than creating new, expensive ventures.

CHORUS represents a good-faith effort by the publishing industry to partner with funding agencies to comply with the terms of the OSTP memo. CHORUS facilitates public access to peer-reviewed publications after a determined embargo period (where applicable) for each discipline and agency. By leveraging existing tools—such as CrossRef, FundRef, and ORCID—CHORUS allows research funds to remain where they are most needed: in the hands of researchers, funding research. There is no substantial cost for agency use or participation in CHORUS.

By focusing on open standards and an open architecture, CHORUS is a scalable solution that offers maximum efficiency for

HOWARD RATNER *is executive director of CHORUS.*

all parties by automating as much of the process as possible. That saves researchers time and effort and minimizes the investment of funds and the continuing work necessary by funding agencies and publishers.

CHORUS identifies articles that are reporting on federally funded research and enables readers to access the "best available version" free of charge via the publisher. The best available version could be either the accepted author manuscript or the version of record. CHORUS launched in a pilot phase in September 2013, and the production phase will begin in early 2014.

Stakeholders

CHORUS has identified many key stakeholders and has been working closely with each group to meet its needs:

- Funding agencies want to meet OSTP guidelines, measure grantee and agency compliance with the OSTP memorandum, show how the agencies' investments are having an effect (return on investment), and provide the widest possible access to articles that report on the research funded by the agencies.
- Researchers want to obtain funding for their research, comply with their funding agencies' requirements, know the sources of funding in their fields, and have access to the best available version of content in their fields.
- Librarians want to have access to the best available version of content for their patrons, conduct text mining and data mining, have confidence that their articles will be readily available in perpetuity, help researchers to comply with funding-agency requirements, and build discovery tools for researchers.
- The public wants to have access to the best available version of content to research a problem or drive economic development, see what the government is funding, learn the effects of specific agency grants, understand the latest

developments in science, and have content connected to learning tools.
- Publishers want to help their authors and institutions to comply with funder mandates and retain traffic on journal Web sites to demonstrate value to their customers.

How Does It Work?

CHORUS enables the **identification** of the appropriate article reporting on funded research, the **discovery** of the article on the publisher's site, public **access** to the article, and **preservation** of the article in a long-term archive. CHORUS tracks each of those features and reports the level of **compliance** on its dashboards.

When researchers submit a paper to a journal through a typical electronic submission system, they will receive a pull-down menu to **identify** the funding agencies that supported their research and an opportunity to fill in specific grant IDs. That is all the effort required by the researchers; they have done their part and are now fully compliant with funder requirements. The paper then goes through the publisher's regular peer-review process and production cycle and is published. The paper's DOI and associated metadata—including the grant information—are then registered at CrossRef, which in turn feeds a variety of metadata services, including FundRef and CHORUS (Fig. 1).

The article is then made publicly **accessible** by the publisher's host system after the funding-agency embargo period expires or immediately if an author has paid an article-processing charge (APC). Article reuse terms are posted by the CHORUS-compliant publisher and made transparent by the CHORUS services and application program interfaces (APIs). Users will have access to the best available version, either the accepted author manuscript or the version of record. Access is always through the publisher for either route to public access; this ensures that the reader is seeing the paper in the context of the journal in which notifications of updates, corrections, or retractions will be available (Fig. 2).

continued

The publicly available articles will be indexed in the same way as any other journal article and can be **discovered** in a user's favorite search engine, such as PubMed or Google. CHORUS provides an open API available to those discovery tools to allow them to enhance their search results with information on the funding source and availability of the articles. The open API also enables funding agencies to create their own discovery tools and build institutional portals. New text- and data-mining services are also enabled via the API (Fig. 3).

For our pilot program, CHORUS worked with the US Department of Energy (DOE). More than 4000 records have been harvested via the CHORUS system into the DOE's "PAGES" agency portal, and the DOE's discovery tool offers search results that point back to individual publisher Web sites via the DOIs of the papers reporting on funded research. This provides clear evidence that CHORUS is a workable solution for funding agencies.

When the paper is published, the publisher deposits a copy of the version of record into one or more of what are called dark archives for **preservation**. The dark archives include Portico, CLOCKSS, and any other archive required by funding agencies. The paper is permanently archived in these repositories but not made available unless compliance trigger events occur.

Trust is an important part of the CHORUS approach, so a great deal of work has been put into ensuring **compliance**. The CHORUS dashboard service allows stakeholders to monitor compliance constantly and provides automated mechanisms to make sure that what has been promised is happening. The dashboard keeps track of the numbers of articles identified, the numbers of articles preserved, the numbers of articles publicly accessible, and the numbers of articles for which there are agency-accepted reuse licenses.

The dashboard automatically checks to see whether papers that are supposed to be publicly available are indeed publicly available. If they are not, a trigger event occurs, and a notification is sent to the agency and the publisher. If the problem is not fixed promptly, the dark-archived version of the paper is brought to light and replaces the publisher's version in the system until public access is restored.
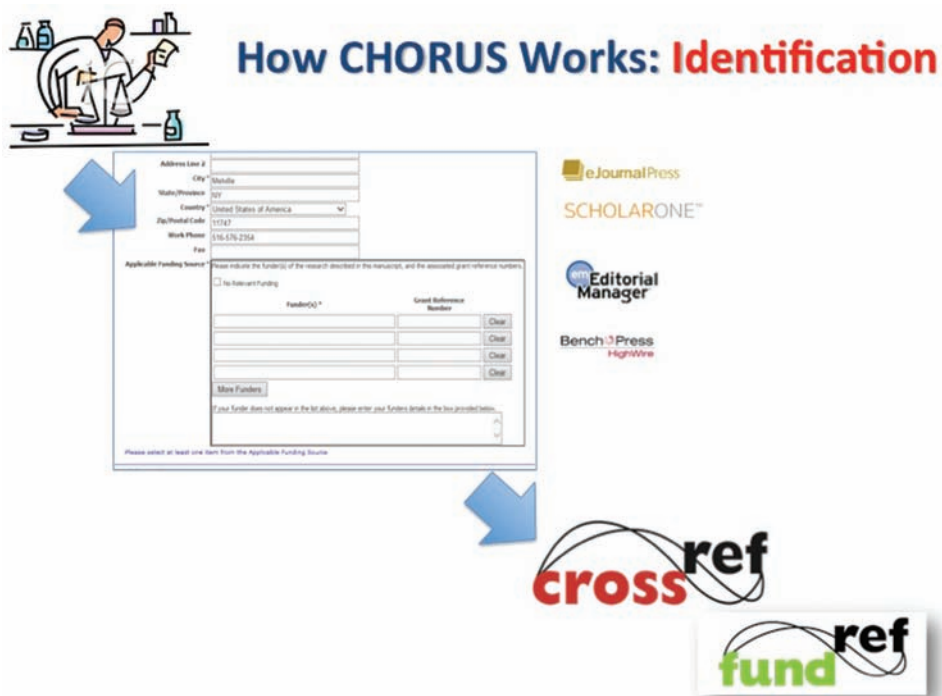
Fig. 1. Identification of funding agencies: the researcher identifies funding agencies and fills in grant numbers on a form from a pull-down menu when submitting a manuscript. When the paper is published, the metadata is fed to CrossRef and other services.
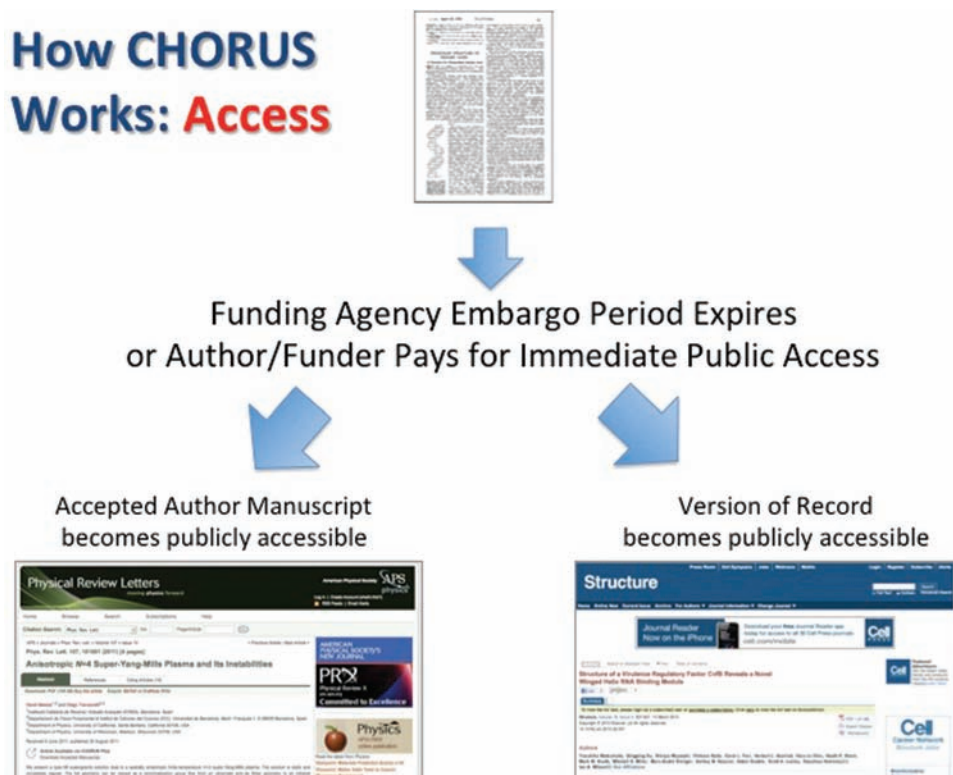
Fig. 2. Making the article publicly accessible: users have access to the best available version, through the publisher, to ensure that readers will see notifications of updates, corrections, or retractions.

continued
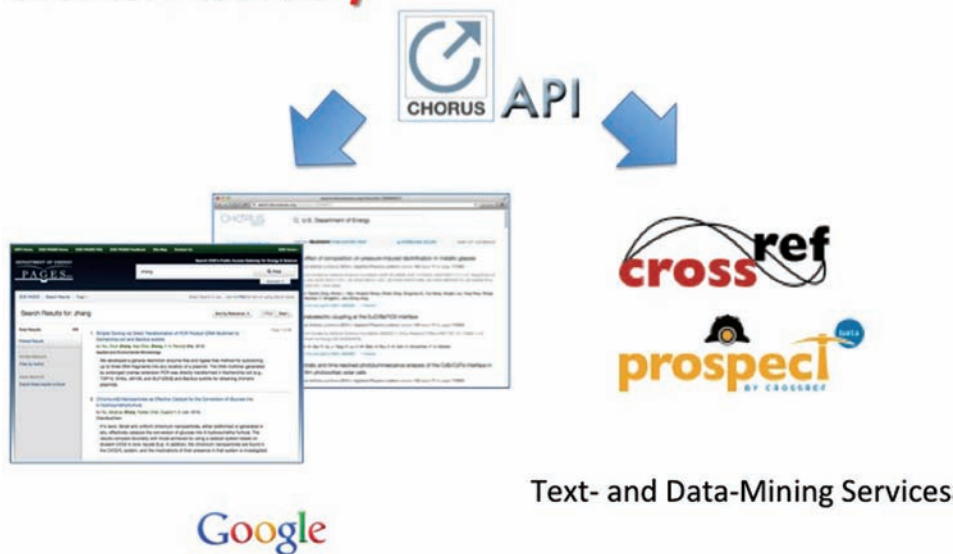
Fig. 3. Making the data discoverable: the CHORUS API enhances PubMed or Google search results with information on the funding source and availability of articles.

The dashboard will evolve and can be customized for specific needs and reporting requirements. The open dashboard data can also be pulled into an agency's, institution's, or publisher's own system via the CHORUS API.

International Relevance and Scale

CHORUS was designed to meet the specific needs of the US OSTP memorandum, but it was deliberately built on open standards and designed for interoperability. CHORUS does not prevent or damage the existence of any other repository or archiving strategy, and the open API can be used to enhance their efforts. CHORUS works equally well with gold and green open access, and the open standards used offer tremendous potential for further development.

Although CHORUS is in its launch phase, international scalability is an important future direction. The very name of the not-for-profit organization behind CHORUS, CHOR Inc, was deliberately chosen to reflect these plans and our hope that this framework can reach far beyond the United States.

Conclusion

CHORUS is a rapidly growing nonprofit solution for public access to scholarly content. It is an open-technology solution focused on the identification, access, discovery, preservation, and compliance of scholarly content reporting on funded research and is internationally scalable. It keeps researcher funding in the hands of researchers and is as inclusive as possible. CHORUS addresses the public-access needs of funding agencies, researchers, institutions, publishers, and the public. To achieve maximum effectiveness, it needs maximum participation from the publishing community. Participating is easy. Find more information at *www.chorusaccess.org*.

continued *(from page 11)*

Discussion

Volunteer editors undertake large responsibilities for overseeing the peer review of scholarly journals. Publishers of the journals are struggling to remain competitive while being mindful of the pressures put on volunteer editors. In our case, anecdotal evidence from the editors regarding the bottlenecks in processing time was inaccurate.

Manuscript-submission systems are increasingly sophisticated with respect to generating data reports. Many systems provide "canned" reports that show high-level statistics that are useful in some types of reporting; however, it is difficult to track

specific concerns by reviewing only canned reports.

The Editor and Reviewer Performance Report has completely changed the conversation at editorial board meetings. The CEs and their AEs have data that show where the bottlenecks are in the process. Arming the editors with this information is critical for allowing them to do what they do best: solve problems.

From the publisher perspective, having these reports and more granular data has highlighted weaknesses in the process. More attention is being paid to late papers, and coordinators are more aggressive in contacting editors who appear to

be struggling to keep up. Journal managers who perform a more detailed analysis will have data to either support or refute editor perceptions on their performance activity. Furthermore, by providing specific turnaround times for smaller pieces of the tasks involved with peer review, the editors have data for valuable discussions about how to manage the workload.

References

1. Snodgrass R. Journal relevance. SIGMOD Record. September 2003. 32(3):11–15.
2. Thomson Reuters. 2011 Journal Citation Reports, Science Edition. 2011.

The EQUATOR Network: Supporting Editors in Publishing Well-Reported Health Research

Iveta Simera

Background

The quality of reporting in a research paper—its completeness, clarity, and accuracy—is crucial for its use in further research or clinical practice. Poor reporting practices are best documented in medical research[1], but other scientific disciplines are not immune to them.[2] Articles that do not provide enough information about study design, methods, or findings prove difficult to index correctly in bibliographic databases, retrieve in targeted searches, assess for relevance and the presence of biases, incorporate into systematic reviews, or use in clinical practice.[3] Reporting shortcomings might not be immediately obvious to readers who only read an article quickly, but they become a major obstacle for a thorough and determined reader, such as a systematic reviewer or clinical-guideline developer. Producing a well-written article that is suitable for different user groups requires a delicate act of balancing what is necessary information for inclusion and what is not.

Reporting guidelines have been developed to help authors in writing up their studies and to help editors and peer reviewers in assessing the completeness of research reporting. This article briefly introduces the EQUATOR Network and its online resources for good reporting of health research, describes key reporting guidelines, and discusses the practical aspects of implementing the use of reporting guidelines in journals.

EQUATOR Network

The EQUATOR (Enhancing the Quality and Transparency of Health Research) Network was launched in 2008 with the aim of improving the reliability and usability of health-research literature by facilitating transparent and complete reporting of research studies. It is the first coordinated effort to do that on a global scale. The work of EQUATOR supports and advances the work of the individual groups that develop reporting guidelines, such as the CONSORT Statement for reporting randomized trials. The most important output of the EQUATOR Network is a unique comprehensive online collection of reporting guidelines and other resources that support responsible publication of research (the EQUATOR Library for health research reporting *www.equator-network.org/library/*). Figure 1 shows the Web page outlining the current content of the library. EQUATOR supports the use of the resources through dedicated toolkits[4] and through various education and training events that target editors, peer reviewers, and authors.[5]

Reporting Guidelines

Reporting guidelines provide structured advice on what information needs to be included in a research article as a minimum to allow readers to assess study methods, relevance, and validity of presented findings. They focus on the scientific content of an article and thus complement journals' instructions for authors. The EQUATOR Network's freely available online library lists more than 200 reporting guidelines. Some are generic methodological guidelines for different types of study designs (such as randomized trials, systematic reviews, and observational studies) that should always be followed in reporting these types of studies. The primary focus of the guidelines

Iveta Simera *is head of program development at EQUATOR Network, Centre for Statistics in Medicine, Oxford, United Kingdom.*

Fig. 1. Current content of EQUATOR Library (www.equator-network.org/library/).

Table 1. Key Generic Methodological Guidelines

Name (guideline acronym)	Guidance for reporting	Guideline Web site*
CONSORT**	Randomized trials	http://www.consort-statement.org/
STROBE**	Observational studies	http://www.strobe-statement.org/
STARD	Diagnostic-accuracy studies	http://www.stard-statement.org/
CARE	Case reports	http://www.care-statement.org/
PRISMA**	Systematic reviews and meta-analyses	http://www.prisma-statement.org/
COREQ	Qualitative research	http://www.equator-network.org/
ENTREQ	Synthesis of qualitative research	http://www.equator-network.org/
SQUIRE	Quality-improvement studies	http://squire-statement.org/
SAMPL	Statistical analyses and methods	http://www.equator-network.org/
CHEERS	Economic evaluations	http://www.equator-network.org/

*All guidelines mentioned in the table are included on the EQUATOR Web site (www.equator-network.org).
**A number of CONSORT, STROBE, and PRISMA extensions exist; these are all included on the EQUATOR Web site and the relevant Web site for the individual guidelines.

is on the description of study methods and corresponding advice on reporting study findings. The content of each of the guidelines has been carefully considered by multidisciplinary groups of relevant experts and stakeholders, and there is a strong rationale for each item of requested information. Table 1 lists the key generic methodological guidelines. Most of the guidelines listed in the EQUATOR library are more specific, providing guidance relevant to a particular medical field (for example, reporting immunotherapy trials) or a particular aspect of research or of a research report (for example, reporting of statistical analyses, adverse events, and specific procedures). These guidelines ideally are used in conjunction with the generic method-focused guidelines.

Implementation of Reporting Guidelines in Journals

The Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals—formerly the Uniform Requirements for Biomedical Manuscripts, the fundamental guidelines developed by the International Committee of Medical Journal Editors—encourage the use of reporting guidelines and EQUATOR resources.[6]

The EQUATOR Web site features a dedicated toolkit section for journal editors and peer reviewers that has been developed to support editors in setting up more rigorous policies on health-research reporting and to improve the relevant parts of their instructions for authors and peer reviewers.[7] The EQUATOR editors' toolkit also provides practical suggestions and experiences from other journals on how to select and use appropriate reporting guidelines in editorial and peer review.

Relevant method-focused guidelines (listed in Table 1) should be the first reporting guidelines considered for implementation, and journal contributors should be clearly instructed to adhere to them. Specialty journals might also consider investigating whether any specific guidelines focus on their clinical field. Many such guidelines were developed by professional societies and provide useful specific guidance that facilitates better comparison of results between studies.

Ensuring adherence to relevant guidelines can be difficult for editors. Invaluable help can be provided by asking reviewers to use the relevant checklists as part of their assessment and to highlight reporting shortcomings in a systematic way.[8]

Improving the Quality of the Health-research Literature

Research and its publication constitute a global enterprise. Most journals are not bound by geography; they are international in scope but focus on specific clinical fields. The focused and yet global nature of research publishing has profound implications for improving reporting quality and the reliability of research literature. Journal editors can play a fundamental role in that process. Possible solutions can include a "vertical" or "horizontal" approach. For example, a vertical approach can involve measures that ensure transparency and completeness of research by visibly linking the individual elements of the whole research process: study registration, availability of protocols and ethical-approval documents, journal publication, and the public availability of findings. The horizontal approach can involve a collaborative effort by editors in a particular clinical field to develop common editorial policies and harmonize their instructions on research reporting. That might lead to improvements in the reporting of research across the field and might prevent authors from resubmitting manuscripts of substandard reporting quality to different journals in the field until they find a publishing outlet. Harmonizing publication requirements throughout a field can also minimize the possible adverse effect on the number of submissions that a particular journal may receive if it is the only one that introduces more stringent criteria. The whole field can then be seen as leading the way in promoting research-publication excellence. Cardiovascular journals are a good example of such collaboration. The European Society of Cardiology National Cardiovascular Journals and the HEART (Heart Editors Action Round Table) group issued various consensus statements to promote editorial excellence, which also include recommendations to encourage adherence to the CONSORT Statement for reporting randomized trials.[9]

Similar efforts to improve the quality of research reporting and thus increase the reliability and usability of available evidence can be seen outside human medicine.[10–13]

Concluding Remarks

Adherence to reporting guidelines is a simple but effective way to improve the

Developing Medical Writing Support in South Korea

Katherine M Stefani

The need for scientific-English support for non–native-English speakers in other countries is obvious, but the methods of execution are not always straightforward. The demanding workloads of biomedical scientists do not always allow them to embark on the seemingly long path of learning how to communicate effectively in scientific English. Throughout 19 months as a full-time medical editor at Yonsei University College of Medicine in the large, bustling city of Seoul, Republic of Korea (South Korea), I developed from a beginner writer and editor to a committed life-long learner in and contributor to the field of scientific communication. Recreating our work environment to promote efficiency and serve as a place of continuing education quickly became passionate goals.

When I entered the position, I was concurrently enrolled in my last semester of graduate school, working toward completion of a master's degree in public health from Yonsei University. As the only foreigner and only native speaker of English, I was constantly challenged throughout graduate school to use my beginner Korean, adapt to the different work environment, and be the main "English resource" in the department. The latter role resulted in frequent requests from colleagues and professors to read and revise their manuscripts written in English. My colleagues and professors assumed that this would come naturally to me solely because I am American and have an undergraduate degree. I did not want to disappoint them, of course, but quickly recognized that I did not know and was never taught "best practices" in scientific writing. I called on my diligence and curiosity as an independent learner, which I had used to position myself in Korean graduate school. Aware that drafting my thesis was just around the corner, I began reading books about scientific writing and several newly published

KATHERINE M STEFANI *is a medical editor in the Department of Research Affairs, Yonsei University College of Medicine, Seoul, Republic of Korea.*

papers in top English-language medical journals each week, paying close attention to style and word choice. Unbeknownst to me at the time, those efforts would help me long after thesis writing when I joined the Department of Research Affairs as one of two medical-English editors for the entire college.

The Department of Research Affairs at Yonsei University College of Medicine is, to my knowledge, the only one of its kind in South Korea. Yet South Korea is home to many biomedical research centers and peer-reviewed biomedical journals with ambitious, hard-working researchers who competitively publish work. As a result, the need for specialists in fields who can aid these authors in publishing their work was evident. In 2007, the biostatistics and medical-editing branches of the department were launched, and a medical illustrator was recruited in 2008.

Shortly after medical editors joined the department, their duties spread beyond manuscript review, translation, and speech writing to all-around support in other fields and departments that required English. For example, the number of international students and guest lecturers who visited the college steadily increased, and this required documents and communication in English. In addition, editors were called on to assist in running biomedical-research symposiums and meetings with international guests hosted at the college.

The scope of our work has not changed, although the execution and management of our duties have changed. In addition to our diverse roles in the college, most of our time is still dedicated to editing manuscripts of original research. When I joined the department, I saw that a lack of clear guidelines and inconsistencies in workflow were creating long wait times for authors who submitted work for English editing. Some authors would ask to have the same manuscript viewed multiple times and sometimes by different people. That resulted in longer wait times and inconsistent levels of service. My first goal was to create guidelines that clearly communicated our available services and our expectations of work sent to us, including reasons why a manuscript could be rejected

without editing. For example, we instructed authors to perform checks for basic grammar and spelling and to format for the target journal before submitting their manuscript for English editing. I proposed that all manuscripts be sent first to outside editing companies for full, comprehensive English editing, which had already largely been supported by the college since 2008, before submitting their manuscript to us, the in-house editors. This pre-editing greatly improved our ability to return work to authors in a speedy manner and to keep up with the large influx of work during the semester months.

Initially, those changes were met with some backlash from authors accustomed to the old system, but support and approval from the directors of our department allowed us to stand by our guidelines. The new workflow helped to create an equal playing field for all authors to submit work and receive it in a timely manner. It also created more work for our administrative staff members, who were required to screen all submissions and communicate our new guidelines before authors could have their papers viewed by in-house editors. But the new process was seen as an overall success.

Once our workflow was running more smoothly, the lack of direct communication and interaction between in-house editors and authors created an unnecessary distance that did not help authors to improve their manuscripts or writing. We theorized that if we could share our knowledge and observations with authors, perhaps we could mutually benefit. In November 2012, we opened our first workshop, "Oral Presentations in English", in response to the substantial increase in the number of presentation scripts we received for English editing and voice recording that semester. Eager graduate students and professors filled the room to over capacity, hoping to learn something useful for future presentations (or perhaps it was the free coffee and snacks?). This year, we held another round of open programs that discussed problems in scientific writing that we believed Korean authors struggle with the most; the other in-house editor and I spoke on the basis of our experiences.

Article

continued

Faculty members were encouraged to attend both sessions, which were received well.

To understand the audience's reaction to the workshops, a short survey was distributed to workshop attendees asking whether they believed that the sessions were helpful and whether they had any other suggestions for sessions on scientific communication. After collecting just over 100 surveys, I was surprised to find that an overwhelming number of audience members asked for a "formula for writing" that would permit them to plug in their key words and draft their manuscripts. Having been excited and energized by the full seminars and the 98% positive feedback, I was initially disheartened by the request for a "plug and chug" approach to writing. However, I welcomed the open communication, and we came up with the idea of smaller workshops with limited numbers of participants that allowed us to work closely on writing exercises and to answer questions.

The smaller workshops were also well attended and well received. Topics included how to use synonyms, articles, and transitions in scientific writing and how to write cover letters and respond to reviewer comments.

One of the major advantages of starting the workshops was that they opened lines of communication between authors and in-house editors. Before the workshops, in-house editors rarely met with authors, and all communication went through administrative staff. The new interaction created mutual trust and understanding, and the number of complaints about guidelines and wait times decreased substantially. That led to the creation of editor office hours, when authors are invited to visit us for short advice sessions about anything related to scientific communication.

The last items needed to aid the editing process were such resources as books, manuals, and other educational materials that

could be used to train future in-house editors and for general reference. Numerous reference materials have been purchased, and an educational training course for the next group of in-house editors is being developed.

Throughout my short but productive 19 months in my first role as a scientific-English editor, I came to see that the most important factor in developing and maintaining an English editing office in a large research institution is establishing cohesion among authors, editors, and administrative staff by setting reasonable, fair expectations and offering resources for all staff to improve their knowledge and skills in scientific writing. Despite the numerous challenges in writing for non–native-English-speaking scientists, more effort should be made by such institutions to distribute reliable, relevant resources widely to improve their ability to communicate effectively in science. ◉

---

continued (from page 16)

completeness and usability of research reports. However, reporting guidelines are *only* guidelines. They provide a minimum set of reporting recommendations, and their use has to be driven by common sense. Only the researchers who conducted a study know what factors could have influenced their study findings, and they need to report all the key study details accurately and honestly. The role of editors and peer reviewers is to remind researchers of that duty and, when possible, ensure that they have fulfilled it. The EQUATOR Network resources will be helpful tools in that process.

Acknowledgment

The author thanks Professor Doug Altman and Mrs Shona Kirtley, of the Centre for Statistics in Medicine, Oxford, for their valuable comments.

Declaration of interest

References

1. Simera I, Kirtley S, Altman DG. Reporting clinical research: Guidance to encourage accurate and transparent research reporting. Maturitas 2012;72:84–87.
2. Sargeant JM, Elgie R, Valcour J, Saint-Onge J, Thompson A, Marcynuk P, Snedeker K. Methodological quality and completeness of reporting in clinical trials conducted in livestock species. Preventive Veterinary Medicine 2009;91:107–115.
3. Simera I. Reporting guidelines: a tool to increase completeness, transparency, and value of health research published in your journal In: Smart P, Maisonneuve H and Polderman A. (eds) Science Editors' Handbook. European Association of Science Editors, 2013, pp. 27–30.
4. EQUATOR Toolkits. *www.equator-network.org/toolkits/* (accessed 12 December 2013).
5. EQUATOR Education and Training events. *www.equator-network.org/category/events/all-past-events/* (accessed 12 December 2013).
6. Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals. *www.icmje.org/* (accessed 12 December 2013).
7. EQUATOR Editors Toolkit. *www.equator-network.org/toolkits/editors/* (accessed 12 December 2013).
8. Hirst A, Altman DG. Are peer reviewers encouraged to use reporting guidelines? A survey of 116 health research journals. PLoS One 2012;7:e35621.
9. Alfonso F, Ambrosio G, Pinto FJ, Ector H, Vardas P, Kulakowski P, and Timmis A on behalf of the Editors' Network ESC Task Force. European Society of Cardiology National Cardiovascular Journals: the 'Editors' Network'. European Heart Journal 2010;31:26–28.
10. Newman M, Elbourne D. Improving the Usability of Educational Research: Guidelines for the REPOrting of Primary Empirical Research Studies in Education (The REPOSE Guidelines). Evaluation and Research in Education 2004;18:201–2012.
11. Jedlitschka A, Pfahl D. Reporting Guidelines for Controlled Experiments in Software Engineering, Proc. Int'l Symp. Empirical Software Eng. 2005;95–104.
12. More SJ. Improving the quality of reporting in veterinary journals: How far do we need to go with reporting guidelines? The Veterinary Journal 2010;184:249–250.
13. Editorial. Enhancing reproducibility. Nature Methods 2013;10:367.

CSE–COPE Joint Session: The Life of a Retraction

Moderator:
Heather Goodell
American Heart Association
Dallas, Texas

Speakers:
Charlotte Haug
Committee on Publication Ethics (COPE)
Journal of the Norwegian Medical Association
Oslo, Norway

Abraham Fuks
McGill University
Montreal, Quebec, Canada

Diane Scott-Lichter
American College of Physicians
Philadelphia, Pennsylvania

Ivan Oransky
Retraction Watch
Reuters Health
New York City, New York

Reporter:
Kristi Overgaard
Wordsetter Editorial Services
Barrington, Illinois

Retractions often seem to take on lives of their own, and they can be complicated lives to manage, even for the most seasoned journal editors. This session focused on milestones in the life of a retraction: its birth as an allegation, the resulting institutional investigation, the journal editor's decision to retract the paper, and the retracted paper's afterlife in the literature.

Charlotte Haug, vice chair of the Committee on Publication Ethics (COPE) and editor-in-chief of the *Journal of the Norwegian Medical Association*, opened the session with a brief background of COPE. She also introduced COPE's retraction guidelines, which can be found at *publicationethics. org/files/retraction%20guidelines.pdf*.

Haug's presentation outlined reasons for retraction of a paper and best practices for retraction. Although various stakeholders can ask for a retraction, the final responsibility lies with journal editors. Haug outlined four situations that call for a retraction: the findings prove unreliable, as a result of either misconduct or honest error; the findings

have previously been published elsewhere without proper referencing, permission, or justification (duplicate publication); the text is plagiarized; or the paper reports unethical research. Editors should not retract a paper to punish authors when only a change in authorship is required or when a small part of an article reports flawed data. In those situations, a correction may be most appropriate.

Haug's presentation ended with a case study that showed the importance of journal leadership in correcting the literature by following the COPE flowchart appropriate to a situation and persevering until the correction was made. Additional examples of cases can be found on COPE's Web site at *publicationethics.org/ category/keywords/retractions*.

Abraham Fuks, research integrity officer (RIO) at McGill University, spoke about investigating allegations of research misconduct and used the process of McGill University as an example. After a good-faith allegation is made, the RIO determines whether there is sufficient evidence to warrant an investigation. If so, the allegation is forwarded to the Committee on Research Misconduct (CORM), which determines the relevant facts and validity of the allegations and recommends an appropriate disposition of the case.

The provost considers the CORM's report and then communicates his or her decision to the various stakeholders. In addition, the provost determines whether any external bodies should be notified of the outcome of the investigation.

Journal editors need to know the results of investigations so that appropriate errata and retractions can be published. But there are still many unanswered questions. For example, Who notifies whom? Who decides when and what to retract? Who writes the retraction? What should it say, and when should it be published? Is there a statute of limitations? How should online versions of articles be handled?

Diane Scott-Lichter, vice president of publishing for the American College of Physicians, provided an editor's and publisher's perspective

of the retraction process. The premise of her presentation was that "journal editors and publishers are responsible for integrity of the literature." Scott-Lichter reviewed four types of publication notices: errata, expressions of concern, partial retractions, and retractions in full. The four express, in ascending order of degree, questions or problems concerning the integrity of the work.

The appropriate handling of retractions is of the utmost importance. The list of stakeholders associated with retractions is long, and the inappropriate handling of retractions can adversely affect people, institutions, fields of study, and science as a whole.

The first step is to determine whether an allegation has merit. If there appears to be merit or if there is doubt, the authors should be asked about it. The authors' responses and the journal's preliminary investigation determine the course of action, which may be taking no further action, asking the authors to correct their work, or turning the matter over to the institution for a more thorough investigation.

Better communication and collaboration between journals on the one hand and authors, institutions, and oversight bodies on the other can lead to more timely and accurate retractions and thus advance the journal's objective of protecting its integrity and the integrity of the scientific literature as a whole.

Ivan Oransky, cofounder of Retraction Watch and executive editor at Reuters Health, brought us to the end of the retraction life cycle by exploring the increasing rate of retractions and the effects of retractions on the afterlife of retracted articles. There has been a steep increase in the number of retractions since 1977 to about 400 each year. However, a retraction does not restore full integrity to the scientific literature. First, there is a lapse of time between original publication and retraction, which allows the suspect material to circulate for a longer time unmarked. Even after the retraction has been made, an article can continue to affect the literature greatly. Retracted papers continue to be cited at an alarming

When the Business and the Ethics of Publishing Collide: Avoiding Fatalities

Moderators and Speakers:
Margaret A Winker
PLOS Medicine
Chicago, Illinois

Christine Laine
Annals of Internal Medicine
Philadelphia, Pennsylvania

Reporter:
Pierrette Tremblay
Elements
Quebec City, Quebec, Canada

As journals' presence on the Internet has increased, new ethical concerns have appeared. How do policies about print advertising translate into the digital world? What are the ethical issues around linking ads to journal topics? What ethical concerns are involved with open-access (OA) fees? What are the ethical issues around presenting readers with content that they may be interested in versus preserving their privacy?

The moderators of this ethics clinic (which had not been advertised as such in the program) presented five case studies, but time allowed for discussion of only three of them in groups.

The OA publishing model "opens a whole can of worms" as it shifts the burden of costs onto authors. One of the concerns is that it will create a two-tier model: Those who can afford to pay will be more likely to be published than those who cannot. In the first case study, a publisher asks the editors to reconsider the rejection of three manuscripts by authors at the same institution after the research director of the institution contacts the publisher and indicates that his institution would be willing to pay the $5,000 OA fee for each of the manuscripts. The group felt that it was not ethical for the research director to approach the publisher with such a request. Today more than ever, editorial decisions should be made independently of the business aspect, and the publisher should not be allowed to interfere. Therefore, a "firewall" should be put in place between the editor and the publisher. For journals that provide an OA option, such an option should not be discussed until the manuscript has been accepted. The editor should have flexibility in being able to make some articles OA even if authors cannot afford to pay.

What about linking ads and editorial content? Advertisers want their ads embedded as close as possible to relevant content. Publishers are struggling to increase their online income. In the second case discussed, a publisher is keen to be able to offer online ads on pages of related content—in this hypothetical case, the ads will display on journal-content pages that deal with medical conditions related to the products advertised. Several attendees mentioned that their journals had online ads only on their home pages, not on content pages. Certainly the publications or editorial committee of a society must establish clear guidelines regarding advertising. If the Web site uses cookies to track reader affinities, that should be clearly stated on the Web site.

Some funding organizations, such as the Research Councils UK, stipulate that research that they fund must be published in OA journals that offer a Creative Commons by Attribution (CC BY) license. This type of license allows figures to be reproduced by anyone, even for commercial purposes. In the third case discussed, an author has obtained permission to publish a patient's clinical image. After publication, a for-profit company resells the image to an advertising firm, which uses it in a public marketing campaign. Needless to say, the consent form has to be explained in detail to patients, and authors have to be aware that there is a possibility of commercial use of patient images under a Creative Commons BY license. Many attendees reported that to avoid this situation, their journals never publish images with recognizable patient faces.

This session met its objectives of raising awareness of ethical issues surrounding digital advertising, author-pays publishing models, and tracking reader engagement and targeting. Ethical questions regarding these topics will require the attention of publishers and societies.

continued (from page 19)

rate, and only a small percentage of citations mention that the papers were retracted. For those reasons, the time lapse between publication and retraction noted above is of particular concern.

What can be done? First, journals must do a better job of communicating retractions to their readership and to the scientific community at large. Supporting the reproducibility initiative may lessen the need for retractions. Finally, using CrossMark is a way for an individual reader to know whether the version of a paper that he or she is consulting is the most current one.

In conclusion, the panel agreed that transparency and education are key to implementing best practices for retractions and other corrections in scientific literature. However, the panel also recognized the deeper cultural issue at play here, which also warrants examination: the culture of advancement, tenure, and promotion in academic institutions, which can reward undiscovered misconduct. Examining the behaviors that this culture is motivating may be another step toward meaningful change.

CrossRef, CrossCheck, CrossMark: An Update

Moderator:
Tony Alves
Aries Systems
North Andover, Massachusetts

Speakers:
Carol Anne Meyer
CrossRef
Lynnfield, Massachusetts

Rachel Lammey
CrossRef
Oxford, United Kingdom

Reporter:
Mary Warner
American Geophysical Union
Washington, District of Columbia

We all use technology to manage the editorial and production processes for our publications. Long gone are the index cards that contained reviewer information, manual checking of references, and those aromatic bluelines. Among the tools used daily in editorial offices are CrossRef's reference-linking service, which revolutionized reference citation; the CrossCheck plagiarism-screening service, powered by iThenticate, which allows editors to check easily for similarity between submitted manuscripts and published work; and CrossMark, which is being adopted by many publishers to identify which version of an article is the final published version of record and to notify readers of updates. In this session, CrossRef's Carol Anne Meyer and Rachel Lammey provided an update on those services.

Meyer started the session with a quiz for the audience. In "So You Think You Know CrossRef", she challenged attendees to answer a series of questions about CrossRef, including

- What was the first service CrossRef offered? (DOI linking.)

- What does DOI stand for? (Digital object identifier.)
- Which type of organization was not originally eligible to participate in CrossRef? (Secondary publishers.)
- How many times per month does someone click on or resolve a DOI? (Almost 10 million.)

She also discussed how DOIs should be presented: as URLs. That way, they are not only unique but actionable by both humans and automated systems. Unwieldy DOIs can be shortened at *shortdoi.org*. She noted that because of the rapid increase in participating publishers, CrossRef has exhausted all the "10" prefixes with six digits and earlier this year began assigning seven-digit prefixes. Full display guidelines can be found at *www.crossref.org/02publishers/ doi_display_guidelines.html*.

According to Meyer, books are the largest growing content type at CrossRef and now account for about 10% of the total DOI links. CrossRef has been assigning DOIs to components—including data sets, figures, tables, and graphics—since 2007, and more than 1 million DOIs now link to data sets in the Protein Data Bank, the International Union of Crystallography, the Organisation for Economic Co-operation and Development, and other organizations.

Lammey continued with an update of CrossCheck and CrossMark. She began by noting that 470 publishers now participate in CrossCheck; more than 34 million content items from 86,000 titles are indexed. More than 50,000 documents are being screened each month, and total documents checked went from about 290,000 in 2011 to about 630,000 in 2012. New features in the iThenticate system, Lammey said, include sec-

tion exclusion (quarter 2 of 2013), file-size increase (quarter 4 of 2013), increased speed (November 2012), more top-level report information, and an updated document viewer. Development is continuing, and future enhancements will include exclusion of small matches and the ability to report on factors other than the similarity score (for example, the largest source match and largest match based on number of words).

The fundamental principle of CrossMark, Lammey noted, is simple: When content changes, readers need to know, and they need to be able to find out about it in an effective way. Publishers include a CrossMark logo on their content; clicking the logo tells a reader whether there have been any updates, where the publisher-maintained version is, and other important information, such as publication history and other publisher-provided data (for example, if a correction or retraction has been issued). If a paper is downloaded from the publisher's site and then referred to later, a user can simply click the CrossMark logo on the PDF and immediately know whether an article has been updated, something that might otherwise be missed.

CrossMark launched in April 2012, and more than 60,000 deposits and 350 updates have been made since launch. CrossRef is working with more than 20 publishers on CrossMark implementation and integration with FundRef, CrossRef's new funder-identification service, and other initiatives. Integration with third-party tools is also under way.

In closing, Meyer and Lammey noted that no publisher is an island and that collaboration and connection are key. As a nonprofit organization, CrossRef supports publishers by providing infrastructure to enable enhanced content.

Soliciting High-Quality Articles

Moderator:
Mary Beth Schaeffer
Annals of Internal Medicine
Philadelphia, Pennsylvania

Speakers:
Darren Taichman
American College of Physicians
Philadelphia, Pennsylvania

Denis Baskin
University of Washington and
Department of Veterans Affairs
VA Puget Sound Health Care System
Seattle, Washington

Reporter:
Liz Gebhardt
ACSESS
Madison, Wisconsin

In a session dedicated to exploring how journals can attract and publish high-quality articles, Darren Taichman, executive deputy editor of the *Annals of Internal Medicine*, and Denis Baskin, executive editor of the *Journal of Histochemistry and Cytochemistry*, drew from their experiences to examine the roles that authors, editors, and publishers play in recruiting articles.

Taichman began by emphasizing the importance of a journal's reputation in attracting high-quality articles—the visibility, impact factor, and review process of a journal can make a big difference to an author who has so many journals to choose from. The submission, review, and publication processes should be as author friendly as possible. When solicited articles are submitted to a journal, Taichman advised that communications from all staff and editors be friendly and collegial. He also encouraged publishers to continue contact with authors after publication, offering assistance; thanking them; providing useful information, such as citation information or media attention; or asking them about their continuing research.

Journal editors can use several avenues to identify potential authors, according to Taichman. He suggested looking at competitor journals that publish material that you like, asking your editorial board members for recommendations, and contacting department chairs and journal reviewers. Other sources of potential papers include abstract and poster presentations, grant-award announcements, and editorials. In soliciting papers, Taichman stressed, honesty is key—be clear about what you can and cannot promise with regard to review and publication.

Baskin followed by exploring who influences journal content and what we mean by high-quality articles. Many players influence journal content, according to Baskin, but in his opinion, the editor of the journal has the most influence. A journal should define what it means by high quality, inasmuch as this can differ by publication. For some journals, high quality may equal a high number of citations and a high impact factor; for others, it might mean novel, interesting content that fits readership culture and expectations and passes editorial review. For most, it is probably a combination of the two. Does high quality mean important advances in the field? Should it include solid findings or incremental advances? Should it stress accuracy and reproducibility of findings?

Baskin suggested using your editorial board to solicit high-quality articles and appointing specialty editors and publishing special issues with guest editors and well-known authors. Speakers presenting at society meetings, workshops, and symposia should also be considered. Baskin suggested distributing calls for papers, soliciting papers from highly cited authors, using "best paper" awards, involving society members, and offering incentives to publish (for example, free color for figures).

It is the editor's responsibility to define quality for a journal, according to Baskin. He urged journals to be realistic when defining their goals and crafting a strategic plan.

In a field with so much competition, attracting high-quality articles can be a challenge for many journals. By using some of the strategies outlined by the speakers—including making the submission and publication process as author friendly as possible, motivating your editorial board to solicit articles, publishing special issues, and having realistic goals—journals can potentially attract and publish articles that are in line with their long-term strategies.

Recent Open-Access Mandates in Europe

Moderator:
Anna Jester
eJournalPress
Rockville, Maryland

Speakers:
Martin Frank
American Physiological Society
Washington, District of Columbia

Katherine McCarter
Ecological Society of America
Washington, District of Columbia

Reporter:
Kelly Newton
PNAS
Washington, District of Columbia

One of the more complicated developments in the evolution of open access (OA) in recent years came in the second half of 2012 with the announcement that Research Councils UK (RCUK) would be introducing a new policy early in 2013. With many publishers struggling to address that and other new challenges, this session provided some background and context for understanding developments.

Martin Frank began the session with a history of OA, starting with the origins of the movement in 1999; since then, the Public Library of Science was founded, and the National Institutes of Health (NIH) Public Access Policy was introduced, requiring that all NIH-funded research be made freely available within a year of publication. Many of the early milestones were concerned mostly with how an article was accessed; publishers could often retain their subscription or copyright models as long as articles were made freely available at some point after publication.

However, 3 years ago, attention began to shift to how articles are licensed and how they can be reused. The 2012 Finch Group report laid out recommendations for the future of OA publishing in the UK and led to the adoption of the RCUK OA policy. The report differentiates between levels of OA publishing: "gold" OA provides access to the full text of an article immediately upon publication on a publisher's own platform, and "green" OA provides free access to an article either in a repository or on the publisher's platform after an embargo period of several months. Publishers' statuses can be found at the SHERPA/RoMEO database (*www.sherpa.ac.uk/romeo/*). As of 1 April 2013, articles receiving RCUK funding must be published in green or gold OA journals and licensed under a Creative Commons by attribution (CC BY) license.

Katherine McCarter detailed the six available Creative Commons licenses, about which more information can be found at *creativecommons.org/licenses*. The licenses cover a variety of access and reuse options, and each requires attribution of the author of the original work. CC BY allows anyone to "distribute, remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation".[1]

The two panelists used the remainder of the session to discuss how their societies are responding to the new mandates. McCarter, with the Ecological Society of America (ESA), has not felt the effects quite as strongly as other publishers, because ESA does not deal with the biomedical sciences. However, it has recently launched one OA gold online-only journal with CC BY licensing as an experiment in a different publishing model. Although it has been popular and has garnered small profits for ESA, the society continues to deal with the challenges of the changing environment and the effects that mandates could have on subscription-based journals.

Frank, with the American Physiological Society (APS), has previously opposed the OA mandates as an intrusion into publishing business models. Nonetheless, APS has also created an OA journal, with cascading peer review from sister journals and flat publication charges; in addition, all OA articles in any APS journal are now published under a CC BY license although non-OA articles are still published in a traditional copyright-transfer model.

During the question-and-answer session, attendees asked whether the panelists felt that OA journals had reduced submissions to non-OA journals; the consensus was that as submissions rise, OA journals could help both to keep submissions manageable at traditional journals and to retain lost revenue from rejected papers. Other attendees were concerned that the RCUK mandate and others like it were not well defined and that there was not much guidance from funders on new mandates. Another attendee asked when and how a society should begin to consider adopting OA policies or launching a gold OA journal. Answers were that publishers need to let the OA business model develop and see whether funding mandates continue to emerge. If possible, societies should experiment with OA journals and different publishing strategies.

Reference

1. About the licenses. Accessed 2013. *creativecommons. org/licenses*.

Translations and Beyond: Reaching Out to the World

Moderator:
Sheehan Misko
American Association for Clinical Chemistry
Washington, District of Columbia

Speakers:
Nader Rifai
Clinical Chemistry
Washington, District of Columbia

Adrian Stanley
The Charlesworth Group (USA) Inc
Philadelphia, Pennsylvania

Mauricio da Rocha e Silva
Scientific Journal Clinics
Sao Paulo, Brazil

Reporter:
Paul Bozuwa
Dartmouth Printing Company
Hanover, New Hampshire

This session did a nice job of identifying the reason that translations are important, the process that one might use to obtain translations, and some of the language complexities that publishers might face in the process.

Nader Rifai presented the case for translations for the journal *Clinical Chemistry* as driven by the mission to make the journal and its ancillary information products and services broadly accessible. The journal has pursued translations in 15 languages by using local affiliated societies that have handled 1,000 articles in the last 5 years (50% in Chinese). Beyond journal articles, the society has worked to translate podcasts, clinical case studies, journal club materials (finding that translated articles had double the downloads versus the average), and trainee council materials.

Adrian Stanley reviewed the issue of *why* translations are pursued and identified the motivation as typically more about mission than money, the great exception being article reprints for pharmaceutical companies. Stanley went on to describe some of the translation tasks beyond journal articles, including translation of brochures, marketing materials, social media, market research, meetings, contracts, and local-language Web sites. Beyond the decision of which materials to translate, choices have to be made about which languages to translate to and what resources to use for the translations. Stanley emphasized the need for time and control. It is particularly important to be sure that goals are aligned when one partners with foreign sister associations, especially when it comes to data gathering and responses. The process should include outlining the scope of translations, creating an agreement with clear expectations, identifying a subject expert to review the translation, and disseminating the translated material. A good translation will assist in the broad dissemination of content, will have potential practical—even life-saving—impact, can build brand awareness, can build community, and can increase global membership. Stanley provided a few specific tips:

- Translators should be acknowledged in the publication.
- Machine translations might be good for general inquiries (Google Web site translations) but can be laughably inaccurate for important information.
- Marketing materials should be vetted by a local native speaker who understands the cultural context.
- Corresponding images should be chosen with cultural context in mind.

Mauricio da Rocha e Silva noted that we often view translation as English to another language. However, many authors are translating their own articles from their native languages to English for publication. In the case of Latin languages (Latin-based languages are spoken by almost 14% of the world's population), there is the advantage that Latin was the lingua franca of science even 1,000 years after it was no longer used as a spoken language. Consequently, much of the English used for scientific writing relies on Latin derivations. English offers some advantages as a scientific language because it has only three to six verb forms and is largely gender neutral. In many cases, scientific writing is simply made up of Anglo-Saxon connectors between Latin terms, so it is accessible to a large portion of the world's population who speak French, Spanish, Italian, or Portuguese. Finally, Rocha e Silva pointed out that writers should avoid the passive voice, particularly when a written piece will be translated. He noted the ambiguity associated with the passive voice, which makes it useful in poetry and terrible for science.

Open-Access Business Models and Implementation Challenges

Moderator:
Tony Alves
Aries Systems Corporation
Boston, Massachusetts

Speakers:
Cameron Neylon
Public Library of Science
Bath, United Kingdom

Heather Goodell
American Heart Association
Dallas/Fort Worth, Texas

Reporter:
Angel Marsh
Anesthesiology
Iowa City, Iowa

Open-access (OA) publishing has come to the fore once again because of the recent mandate set out by Research Councils UK based on the 2012 Finch report. This session addressed various models of OA publishing.

Cameron Neylon, advocacy director of the Public Library of Science, expressed how OA models should be viewed as sustainability models. For OA publishers to survive, they must serve their authors. OA is a fee-based service, so publishers need to give valuable service to justify the cost to authors.

Neylon pointed out that a distinction is often made between traditional subscription-based services and OA services as though the distinction is a simple matter of switching revenue streams. The shift to OA is more complex than a shift from one revenue stream to another. Scholarly communication services can be funded by "push" revenue streams made up of funders and authors and "pull" streams funded by subscribers and third parties, such as advertisers and reprint purchasers. Subscription-based services are funded by readers and subscribing institutions, but additional revenue comes from page charges, color charges, and reprints. OA services are funded through authors (generally by institutions and funders), but additional revenue can come from multiple sources, including reprint sales, subsidies, and advertising.

According to Neylon, managing—and managing well—the challenge that comes with billing for services is crucial. Changing and diversifying revenue are critical elements in reducing costs associated with providing OA services. The "take-home" points are these: complex billing will kill you (keep it simple!), volume matters (as margins decrease, volume is the only way to generate revenue), and selectivity also matters.

Heather Goodell, director of scientific publishing of the American Heart Association (AHA), discussed how AHA recently made the transition to OA publishing for its newest journal. AHA developed a task force and set a goal for determining how open data, open source, and OA might help it to meet its mission. AHA has aggressively launched new journals; the newest one is OA and is just over a year old. Despite lack of demand for this service from its authors, AHA knew that there was a need to experiment.

AHA had little experience in the realm of OA publishing and decided to do a feasibility study, looking at branding issues, strategic risks and benefits, competition, self-competition, and financial issues. Goodell related several concerns about whether there was enough research in the field to sustain OA and whether there was room for growth. Competition from within was also a concern, as was finding the right publisher to partner with. The association needed support from the other AHA journal editors because the vision was for the OA journal to have the broadest range of all the AHA journals. The AHA Membership Councils were tapped to assist in obtaining content, but AHA needed to name an editor-in-chief, determine a title, and secure a publisher. The process was arduous, but it resulted in a successful OA journal.

Those perspectives provoked some thoughtful discussion among the attendees. Although OA is not a new concept, it is being more aggressively marketed, and more journals are offering OA options. Serving authors by disseminating their important research is a must.

Checklist for Instructions to Authors

Journal Editors: Go to the CSE Web site and select Editorial Policies to find a new checklist (*www.councilscienceeditors. org/i4a/pages/index.cfm?pageid=3286*). This checklist was designed to help identify best practices in publication ethics to strengthen the ethics section in your Instructions to Authors.

Seventh International Congress on Peer Review and Biomedical Publication: Progress, Peril, and Promise

Annette Flanagin

More than 500 editors, researchers, and publishers gathered in Chicago in September 2013 to discuss the latest research aimed at examining and improving the process of scientific publication. As with previous congresses, the goals of the Seventh International Congress on Peer Review and Biomedical Publication were to put scientific publication under the same scrutiny that editors impose on science itself and to improve the quality and credibility of biomedical peer review and scientific publication. More than 500 participants from 32 countries attended and engaged in lively discussion of over 100 plenary-session poster presentations of new research. Under the direction of Congress Director Drummond Rennie (JAMA and University of California, San Francisco, and past president of CSE), original research was presented on many timely topics: authorship, editorial and peer review, ethical issues, misconduct, citations, conflict of interest, publication bias, data and content sharing and access, quality and registration of clinical trials, reporting guidelines, and postpublication access, dissemination, and exchange.

ANNETTE FLANAGIN *is executive managing editor and vice president for editorial operations of* JAMA *and was The JAMA Network Congress coordinator for the Peer Review Congress in Chicago, Illinois.*

Peer Review Congress Organizers Trish Groves and Fiona Godlee of the *BMJ* and Conference Director Drummond Rennie and Annette Flanagin of *JAMA*.

The abstracts presented demonstrated numerous kinds of advances in the scientific-publication enterprise and many areas for improvement and further evaluation. Topics included research that is reported incompletely, without proper validation, or without adequate disclosures or that may be exaggerated or "spun" by authors and published in journals by editors, many of whom may be "hobby editors" (ie, experts in their area of science who edit a journal but do not have extensive publishing experience). In addition, provocative keynote addresses were delivered by John Ioannidis, professor at Stanford University School of Medicine ("Replication and Reproducible Research: Utopia or Reality?"), and Phil Campbell, editor of *Nature* ("Challenges in Editorial Selection Posed by Current Science").

The complete program is available on the Peer Review Congress Web site: *www.peerreviewcongress.org*. Links to abstracts of the research presented and articles as they are published are available on the site, as will be announcements about plans for the Eighth Peer Review Congress, to be held in 2017.

In Memoriam: M Therese Southgate, MD, Physician–Editor, Fine-Art Specialist

Roxanne K Young

Marie Therese Southgate, MD, a senior editor at *JAMA: The Journal of the American Medical Association* for nearly 5 decades, died at her home in Chicago on 22 November 2013 after a short illness. She was 85.

Dr Southgate was born in Detroit, Michigan, on 27 April 1928; the family moved to Chicago in the 1930s. She attended the College (now University) of St. Francis in Joliet, Illinois, graduating with a degree in chemistry in 1948. She earned her MD from Marquette University School of Medicine (now the Medical College of Wisconsin) in 1960, one of only three women in her graduating class. She completed her rotating internship at St. Mary's Hospital in San Francisco in 1961.

Dr Southgate accepted the position of senior editor at *JAMA*, headquartered in Chicago, in 1962, as the first woman to hold that position. Two years later, the editors of *JAMA* made the bold and unprecedented decision to feature a work of fine art on the journal's cover. In 1974, Dr Southgate was promoted to deputy editor, the second-highest position at the journal. In that same year, she began to select all the works of fine art and to write an eloquent accompanying essay. "The Cover" became a hugely popular and much-admired weekly feature until the journal was redesigned in 2013. Although she had no formal art education, she had a keen appreciation of the fine arts and crafted "highly insightful, lyrical essays".[1]

Many readers—physicians and nonphysicians alike—often asked why a pre-eminent journal in clinical and scientific medicine would reproduce a renowned work of fine

ROXANNE K YOUNG *is associate senior editor,* JAMA, *Chicago, Illinois.*

Photo taken by Norris McNamara in Ryerson Library of the Art Institute of Chicago.

art on its front cover each week. The answer was clear: "The visual arts have everything to do with medicine," Dr Southgate said. "There exists between the two an affinity that has been recognized for millennia. Art is a uniquely human quality. It signifies the unquenchable human quality of hope. Long and loving attention is at the heart of painting. It is also at the heart of medicine, at the heart of caring for the patient."

"Terry Southgate became the most beloved of all *JAMA* editors as a supremely sensitive humanist who selected the world's greatest art with which to educate countless physicians about the intense humanity of their calling," said former *JAMA* Editor-in-Chief George D Lundberg, MD. In a 2007 Medscape interview, Dr Southgate stated: "What has medicine to do with art? I answer: Everything."

JAMA Editor-in-Chief Howard Bauchner, MD, stated, "One of the great strengths of *JAMA* for decades has been its inclusion of the humanities—and no one epitomized that effort more than Terry Southgate, who orchestrated the wonderful art in *JAMA* for more than 40 years."

In 1997, 2001, and 2010, Dr Southgate published three successive collections of her essays and the accompanying images that had appeared in *JAMA* over the years—*The Art of JAMA*—to critical acclaim. She was the 2008 recipient of the Nicholas E Davies Memorial Scholar Award for Scholarly Activities in the Humanities and History of Medicine from the American College of Physicians. She was chosen by the US National Library of Medicine as a Local Legend, "honoring the remarkable, deeply caring women doctors who are transforming medical practice and improving health care for all across America".

Catherine D DeAngelis, MD, MPH, editor emerita of *JAMA*, stated: "The world has lost a warm, soft-spoken, unpretentious icon who taught so many physicians and others the value of art in life and who now exemplifies her motto, Ars longa, vita brevis" (Art is long, life is short.).

Dr Southgate semiretired from *JAMA* in 2008 and spent much of her time in her Marina City writing studio in Chicago, polishing her memoirs and finishing a murder mystery set in a medieval English town.

Reference

1. Meet local legend: M. Therese Southgate, MD. Local legends: Celebrating America's Local Women Physicians. US National Library of Medicine. *http://www.nlm.nih.gov/locallegends/Biographies/Southgate_Therese.html*

Open Access: Conflict and Heresy

Rick Anderson

Open access (OA) is a long-standing topic of conversation in the scholarly communication field, and the issue remains vexing. The controversy has two primary dimensions. First, within the movement itself, there is pervasive disagreement over how the term should be defined. Second, there is disagreement between those inside and those outside the OA movement about whether OA (however defined and implemented) offers a net benefit or a net detriment to the world of science and scholarship. Apart from those two dimensions of essential conflict, there is one other, which arises whenever a member of the scholarly or scientific community attempts to address issues related to OA in a critical—rather than evangelical—mode. In this editorial, I will briefly discuss each of the three aspects of controversy and conflict.

In common parlance, OA is generally understood to refer to "the practice of providing unrestricted access via the Internet to peer-reviewed scholarly research".[1] However, the formal definition of OA has been a matter of controversy for virtually as long as the concept has existed.[2] Three formal definitions in particular are cited often: one arising from the Budapest Open Access Initiative[3] of 2002 and two others arising from the Bethesda Statement on Open Access[4] and the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities[5] of 2003. Two of those documents—Bethesda and Berlin—specify that OA implies more than simply giving the reading public free access to the work in question, that it also means allowing reuse of the work by the public in ways that would normally be controlled by the copyright holder, including the creation and publication of derivative works. Although many individual members and constituent organizations of the OA movement strongly support that criterion,

RICK ANDERSON *is associate dean for scholarly resources and collections in the J. Willard Marriott Library, University of Utah, Salt Lake City, Utah.*

others in the scholarly community are often surprised to learn that what they think of as OA (free access to the reading public) is considered by others to be something less than "real" OA. That recognition frequently leads to conflict.[6]

Furthermore, it is not universally agreed that the term OA should apply only to peer-reviewed scholarly or scientific work, although peer-reviewed scientific publications are generally the focus of concern. There is also disagreement over questions of versioning: Is public access to the author's final manuscript sufficient under an OA regime, or must the OA version be the final, fully edited article, formatted for publication? And what about embargoes? If an article meets the strictest definition of OA but is made publicly available after some embargo period rather than immediately on publication, does it still qualify as OA? Opinions on those matters vary considerably, and the issue continues to be controversial.

Compounding the disagreements is the vexing problem of economics. Clearly, a scholarly journal that does not charge readers (or readers' agents, such as libraries) for access to its content is likely to have trouble maintaining a revenue stream. Two general models of OA address that problem. The first is the "gold" model, under which an author typically pays an up-front fee (thus preserving the publisher's revenue stream) and the article is made immediately available on an OA basis on publication. The second is the "green" model, under which the article is published as usual in a conventional subscription journal, but the author is allowed to archive some version of the article in a public repository, either immediately or after an embargo period. The latter version of OA poses a greater or smaller economic challenge to the publisher depending on which version of the article is made freely available and on the length of the embargo. There is a wide spectrum of opinion within the OA movement on the relative merits of these models, and the disagreements often become quite heated.

The first dimension of conflict, then, is largely over issues of definition and boundary maintenance, and much of it plays out between the members of the scholarly community who are already committed to OA in principle. The arguments might be likened to sectarian disputes between religious denominations, all of which agree on the general outlines of belief but differ on questions of authority, rite, and doctrine.

The second dimension of conflict arises when there is disagreement between OA advocates and those who are not committed to OA, either in principle or in practice. The latter distinction—between principle and practice—is important. Some members of the scholarly community support OA in principle but have concerns about its practical implications or about aspects of currently prevailing OA models; others, while recognizing the desirability of expanded access to scholarship, are not convinced that any OA model offers the best solution to the problems that face scholarly communication. This conflict might be likened to one between religious believers and agnostics or atheists. Some outside the community of OA advocates and activists have, for example, pointed out that gold OA models will probably redirect research funding away from research itself and toward the dissemination of research and that a supply-side funding model poses the danger of putting more low-quality research into the marketplace.[7] The question in this case is whether the world benefits more from universal access to less research or from limited access to more research.

Observers have also raised concerns about the downstream consequences of green OA policies and mandates,[8] which tend to make it harder for publishers to sell access to their content. Some scholars would be happy to see large commercial publishers' revenues being affected that way but may be less sanguine about the prospect of financial harm to their own scholarly and scientific societies—many of which rely on revenues from their own subscription journals, which are often published on a nonprofit basis.

continued

Those conflicts are fundamentally healthy in that they represent engagement with serious and basic issues. OA constitutes a substantial change in how scholarly communication takes place, and it is only to be expected that such change would be difficult and in some ways controversial.

However, there is a third dimension of conflict around OA, and it is far less healthy. It has to do with the OA community's frequent reluctance to acknowledge, take seriously, or (in some cases) even allow critical questioning of OA's foundational assumptions or of the wisdom of particular OA initiatives. In general, the OA community tends to tolerate disagreement and discussion about the proper definition of OA, the appropriateness of embargoes, and the relative merits of gold and green models. But it is much less tolerant of discussion concerning the potential adverse (or even simply unintended) downstream consequences of OA itself. That reluctance is particularly alarming because it tends to set boundaries on what it is acceptable to say or to think. Here, again, a religious analogy suggests itself: all too often, to question the appropriateness, wisdom, or efficacy of OA is to be treated as a heretic. Those who raise questions or concerns about OA are regularly accused of being against openness and sharing or are told that they should not raise such questions in OA discussion forums, or they are even accused of being agents or shills for commercial publishers. (Here, I write both from personal experience and on the basis of experiences shared privately with me by others who are afraid to air their concerns publicly.)

That dynamic is by far the most alarming aspect of the current conversation around issues related to OA. As a model, OA is both interesting and promising. In some important ways, its growth continues to be marked and fostered by vigorous and healthy debate. But as long as the culture of OA advocacy actively discourages critical engagement with the assumptions of OA itself and discourages the airing and discussion of OA's adverse effects (both actual and potential) as well as its favorable ones, the movement's growth and legitimacy will be undermined. The OA community's projections and analyses will lack authority, its proposals will be regarded with suspicion, and its advocates will be applauded by partisan supporters and distrusted by everyone else. Driving critical questions and concerns underground may make life easier for the OA community in the short run, but it will only create deeper problems for that community in the long run.

References

1. Wikipedia. "Open Access" (cited 6 December 2013). *en.wikipedia.org/wiki/Open_access*
2. Meyers B. Society for Scholarly Publishing Issue Status Report. "Open Access: a matter for definition" (2004 June). *snhs-plin.barry.edu/ Research/online_access_SSP_Status_Report.pdf*
3. Budapest Open Access Initiative. (cited 6 December 2013). *www.budapestopenaccessinitiative.org/read*
4. Bethesda Statement on Open Access Publishing. (cited 6 December 2013). *legacy.earlham.edu/~peters/ fos/bethesda.htm*
5. Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities. (cited 6 December 2013). *openaccess.mpg.de/286432/Berlin-Declaration*
6. Royster P. "Up from under the "Open Access" bus". J Librarianship and Scholarly Communication. 2012;1(2):eP1045. *jlsc-pub.org/jlsc/vol1/iss2/3/*
7. British Sociological Association. Submission to the Business, Innovation and Skills Committee inquiry into Open Access. 7 Februry 2013. *www. britsoc.co.uk/media/50174/BSA_Submission_BIS_ Consultation_Open_Access.pdf*
8. Esposito J. Scholarly Kitchen. "When it comes to Green OA, nice guys finish last". 26 September 2013. *scholarlykitchen.sspnet.org/2013/09/26/when-it-comes-to-green-oa-nice-guys-finish-last/*

Calling All Photographers

Do you have original photographs that pertain to areas of science, medicine, or publication? Submit them to Patricia K Baskin at *pkbaskin@gmail.com* for consideration as a *Science Editor* cover image.

Member profile: Cheryl Iverson, MA

Stacy Christiansen

The name Cheryl Iverson has become synonymous with style, specifically, the *AMA Manual of Style*. Although Cheryl has officially retired from her full-time position at The JAMA Network, she cochairs the committee that was recently reconvened to produce the next version of the stylebook.

Cheryl's interest in editing, word usage, and publishing is life long. She considered a career as an English instructor (perhaps enlightening students on contemporary poetry or literature) but was also interested in the world of publishing. In the end, she found publishing to be "a nice limbo between business and academe".

Her first job was with Scott Foresman, working on a usage index. Other than a 3-year stint as an editor in the University of Chicago Press Books division (where she enjoyed the diversity of topics and long-term projects), Cheryl spent the rest of her full-time working career at the American Medical Association. She began as an editorial assistant, then became a copyeditor, and then editing supervisor. Her most recent position was managing editor of the nine JAMA Network specialty journals. She notes that in her 37 years with the journals,

STACY CHRISTIANSEN *is director of manuscript editing at* JAMA, *Chicago, Illinois.*
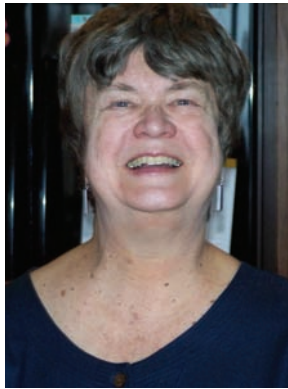
Cheryl Iverson

she has seen great changes in the editing and publishing jobs, not the least of which was the transition from working on paper to a nearly completely electronic workflow.

In addition to her regular work with the journals, Cheryl was keen on finding an opportunity to improve the resource that medical editors use every day (the *AMA Manual of Style*). She volunteered to read proofs of the seventh edition, and by the eighth edition she was stylebook committee chairperson. The most recent edition (the 10th) was published in 2007, and she is hard at work wrangling the committee for the next edition and showing me the ropes as cochair.

Her work on the stylebook is widely known and respected. At a conference of the American Medical Writers Association, another attendee told Cheryl, in awe, "You're the closest thing the field has to a rock star."

Cheryl has also been a member of CSE for many years. She credits Susan Eastwood with mentoring her by getting her involved with the short courses. Specifically, Cheryl worked on the Short Course for Journal Editors and then became involved with the Education Committee. She enjoyed that so much that she helped to develop and launch the Short Course for Manuscript Editors and the Short Course for Managing Editors. She believes that those educational offerings are an important mission of CSE and notes that her work on the short courses and her work on the *AMA Manual of Style* have been her most fulfilling career contributions.

Cheryl pursues many activities outside editing, publishing, and wrangling stylebook committees. She enjoys attending concerts of the Chicago Symphony Orchestra, has season tickets to several major theaters in Chicago, belongs to a book club, and is an avid knitter.

When asked about her plans for retirement, she noted, "I want to do more of everything I like already." Those things include traveling, cooking, knitting, reading, and getting together with friends. This year, Cheryl combined several of her interests by taking a knitting trip to Wales. Up next is a knitting tour of the Scottish islands.

Whether she's editing, managing stylebook committee meetings, knitting, or traveling, one thing is certain: Cheryl always does it with style.

Asking for Trouble: Submit questions or problems to "Solution Corner"!

One of the returning features of *Science Editor* will be "Solution Corner", a column that explores problems and challenges that our members deal with in their jobs, be they technical, managerial, or other issues in the STM publishing realm. This column needs your input! If you submit a question that is general enough to be relevant to many of our members to solutioncorner@ametsoc.org, we will run it by two or three professionals in the field; your question and their responses will be printed in *Science Editor*. We look forward to your submissions!

On Paper: The Everything of Its Two-Thousand-Year History

Nicholas A Basbanes. New York: Knopf; 2013. 430 pages. ISBN-13: 978-0-307-26642-2.

Robert Brown

Previous books by Nicholas Basbanes have all been, in one way or another, books about books and those who love them. In his new one, *On Paper*, Basbanes turns his attention to the stuff that books (and much else) are made of: paper. On its surface, paper may seem a rather flat subject (wordplay is hard to pass up with a material so ubiquitous), but Basbanes does his best to make it as multidimensional as the origami he writes about late in the book.

Does he succeed? By and large, yes. He comes at his subject from a variety of angles and uncovers some surprising stories along the way. But as a whole, the book doesn't come together as anything so organized and unified as origami. The pleasure is in the pieces.

The reason that paper was such a runaway success as an invention is inherent in its properties. Put simply, paper outperformed its competitors on all points. Paper is plentiful and durable. (Not so papyrus, which grows only in Egypt and rots in high humidity.) Paper is pliant and lightweight. (Bamboo strips, once used in China, are heavy and unbending.) Paper is inexpensive and indelible. (Parchment was neither—it was expensive to produce, and its ink could be scraped off.) Soon after its invention in China, traditionally considered to have occurred in AD 105, paper quickly proved its manifold utility and spread east and west until, centuries later, it had covered the world.

Early in his research, Basbanes recognized that he could not tell the real story of paper if he limited himself to treating it as a material good. The real story of paper lies in the multitude of things that humans have found to do with it. The closest Basbanes gets to articulating a thesis comes early in the preface: "my driving interest points more to the *idea* of paper" (p. xii, author's italics). If paper as an idea does not make for much of a thesis—more of a rhetorical

ragbag, really, than an argument—it does say a lot about his method. What drives the book is its author's curiosity about its subject.

Nominally, the book is divided into three parts. Part 1 relates, in highlights, the history of paper from its beginnings through the 19th century, when wood pulp became the predominant raw material of its manufacture. Parts 2 and 3 consist of chapters that explore the myriad uses to which paper has been put over the ages. They include Da Vinci's sketches of visionary contraptions, cartridges used to load 18th-century firearms, and late-19th-century toilet paper that brought unprecedented hygiene and comfort to a mass market. Those 12 chapters are episodic rather than sequential. In fact, they could be shuffled like so many playing cards (another paper product) and suffer little for the rearrangement. Readers at least have the benefit of being able to pick up and set down the book without losing their way.

Basbanes calls his book a work of history, but he researches and writes like the journalist he was for many years. Living sources provided much of his information about the past, and he gives over long stretches to quoting them. In each chapter, he takes the reader on a field trip—to the Marcal paper company, the Massachusetts Historical Society, the National Security Agency, and many others. In each place he visits, Basbanes interviews experts who explain to him how paper figures into the business at hand. To each interviewee he puts a version of the same question: What is the value of paper to the work you do? Here is how a conservator at the Folger Shakespeare Library answers (p. 252):

> He [the conservator] was amused by the question—how do we measure value after all, when it comes to paper?—but gave it some thought all the same.
>
> "So you're asking me if these sheets of paper are valuable in and of themselves. I guess the answer is no—probably not. But that is a very interesting point you raise."

The conservator goes on to explain that he often finds, tucked inside the books he

restores, old broadsides, pamphlets, and religious tracts put there by someone long ago to reinforce a weakened binding. From the thousands of such sheets rescued from oblivion, the conservator helped to organize an exhibit called *The Curatorial Eye: Discoveries from the Folger Vault*.

The moral of this story is that the value of paper can sometimes be impossible to reckon from its physical makeup, which is no more or less than a lattice of cellulose fibers bonded in a flat, flexible plane. Junk paper that someone once repurposed as reinforcement becomes for someone else, in another time and place, a unique artifact worthy of restoration and display. Some paper valued today survived only because at one time someone decided that it was worthless.

On Paper has many moments like that, recounted skillfully by Basbanes, when paper assumes a new significance as Basbanes and his interlocutors try to pin down its value. That some readers respond favorably to these pivots of perspective is evident in a comment made by an Amazon.com reviewer named takingadayoff: "this is the sort of book I love to read—one in which I learn to see something in a whole new way, get answers to questions I never knew I had, and come away with a new set of questions." If *On Paper* has a perfect reader, someone who represents the ideal audience that Basbanes probably had in mind, takingadayoff, I think, would be such a reader.

Editors and publishers intrigued by the book may wonder whether the author has anything to say about the world going paperless. Outside acknowledging the hype, he says little directly. But he does end the book with a chapter on the fallout of 9/11, when the skies over New York City literally rained paper. It was paper that gave first testament to the death and destruction that occurred that day. And in the days to follow, it was paper that covered the city in missing-person notices and, later, in memorials to those lost. Basbanes doesn't tell us what we are to make of that, but he does invite us to reflect on it—the idea of all that paper. ◉

ROBERT BROWN *is a copyeditor with the* Journal of Neurosurgery *Publishing Group in Charlottesville, Virginia.*

Marginalia

Barbara Meyers Ford

How to Look into the Future

An IRI report issued in November 2013 envisions the state of R&D in 2038 by using this process:

Step 1: Look at existing trends. In our case, what are current leaders in the world of publishing forecasting?

Step 2: Seek out "weak signals" or trends-to-be. Will scientists, engineers, and physicians continue, increase, or decrease their use of social media? One recent study reported that 14% of physicians use social media daily to connect with colleagues or research patients' symptoms.

Step 3: Develop a scenario, then "backcast". Backcasting is like setting up a production schedule. Start with the print or release date and work your way backward, determining what needs to be done and when to get you to that point.

Adapted from *FastCompany*, November 2013.

Best Apps for Finding New Literature

ElectricLit: A mobile version of ElectricLiterature.com, a digital literary magazine with new and back issues available for iOS and Kindle. $5/issue.

McSweeney: Tracks new multimedia content each week from its publications, such as *McSweeney's Quarterly* and the book magazine *The Believer*. For iOS; $3/month.

Storyville: "Keeps it simple: one story each week." Receive material from mainstream and small presses. $5 for 6 months on iOS; $1.50/month for Kindle.

Info source: *Nylon.*

Become a Mentor

Feeling ready to share your experience, wisdom, and compassion? There are more than 5,000 programs for young people at mentoring.org, where you can search by age group and ZIP code. Connect with college students who want to learn job skills. Explore museums with high-school students who have just immigrated to the United States . . . or even be an e-mentor! Adapted from (Why not?) *Woman's Day*, January 2014.

My Reading List

Would you like to share your professional reading list?

If so, please send me an e-mail at MCSone@verizon.net.

What I Just Read
The Story of Ain't: America, Its Language, and the Most Controversial Dictionary Ever Published, by David Skinner. HarperCollins, 2012. This book relates the story of how *Webster's Third New International Dictionary* broke with tradition and added thousands of new words and eliminated "artificial notions of correctness, basing proper usage on how language was actually spoken". If you enjoy publishing history, you'll find this book an interesting read.

What I'm Reading Now
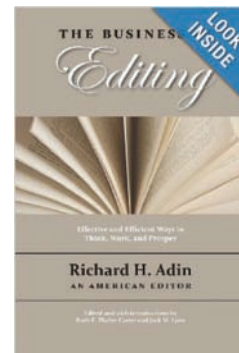
The Business of Editing: Effective and Efficient Ways to Think, Work, and Prosper, by Richard H. Adin. Waking Lion Press, 2014. I've selected this as a required text for my graduate course this coming semester and now am carefully picking out Adin's best in the 421 pages (not counting the extremely well-done 14-page index) that cover editing from top to bottom. P.S.: This is an excellent resource for all types of editing professionals with great advice for those deciding to freelance.

What I'm Reading Next

Groundswell: Winning in a World Transformed by Social Technologies, by Charlene Li and Josh Bernoff, Forrester Research. Harvard Business Review Press, 2011. I'm an *HBR* junkie, so it's not surprising that I have a pile of its books "to be read" at any given time. *Groundswell* has been cited as "one of the most useful primers on the surge in social media" in many favorable reviews; as we all know, social media are here to stay. Trying my best to keep up, I also intend to follow the *Groundswell* blog and take advantage of other resources available at *www.forrester.com/groundswell*. Join me in this read, and send your thoughts to MCSone@verizon.net.
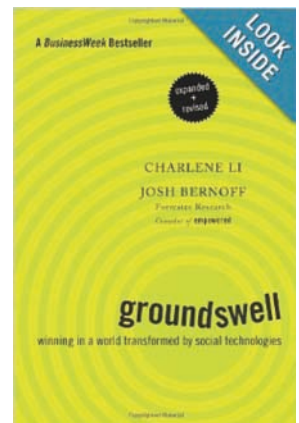
The 2014 Annual Meeting: Meet Us in San Antonio

Kristi Overgaard, Christine Casey, and Heather Goodell

The 2014 CSE annual meeting is organized around the theme "4D Publishing: Data, Decision, Difference, and Direction". Scholarly publishing is growing faster than our ability to understand options or to harness the benefits of available technology. In our electronic age, there is an overwhelming amount of data. These data are necessary to guide decisions, make a difference, and chart new directions. The keynote, plenary, and breakout sessions at the CSE annual meeting in San Antonio will take us on a journey from the big picture to practical application.

- The keynote speaker will be cultural historian and media scholar **Siva Vaidhyanathan**, PhD, who is the Robertson Professor in Media Studies at the University of Virginia in Charlottesville, Virginia. He is well known for his pioneering commentary on copyright, technology, and the dissemination of information via the Internet and in scholarly publication. His remarks will consider editors' influence in selecting, presenting, and sharing information; these hefty editorial responsibilities are complicated by publishers' requirement for a sustainable and profitable business model. Consequently, what is the right path?
- The plenary speaker will be publishing leader **Howard Bauchner**, MD, editor-in-chief of JAMA and The JAMA Network, who will present a talk titled "Evolving issues in scholarly publishing: open access, data transparency, the digital world". For over a century, publishing evolved slowly. Print, paper, and mail dominated. Then came the Internet—and with it more changes in the last decade than in the preceding 100 years. Dr Bauchner will explore issues that editors grapple with, including open access, data transparency, fabrication and falsification, the digital space, and the development of a brand.

The breakout sessions will tackle the *big* publishing issues: big data, open data, open access, reproducible research, data repositories, ethical issues, the fundamentals, new products, government mandates, and more. Our meeting in San Antonio will allow us to see for ourselves how everything really is bigger in Texas!

Here's a sneak peek at the program:

Explore the data minefields. With the advance of scientific discovery and technology, a plethora of data has outpaced our ability to handle them. Learn how journal editors can improve the accessibility of data and assist in archiving and facilitating of standards for the use of various types of data, whether they are "big", supplementary, or underlying data.

- *Big Data Science: Challenges and Opportunities*
- *More than a Collection: Applied Uses of Supplementary Data*
- *Public Access and Reproducible Research: The Journal's Role, Responsibility, and Contribution*
- *Standardizing Data and Data Exchange in Scholarly Publishing*

Does "new" mean improved? While there is wisdom in the old adage "If it ain't broke, don't fix it", we all should consider and adopt new improvements for our journals and readers. But is "new" really better? These sessions showcase beneficial changes and describe innovations on the publishing horizon.

- *Crowdsourcing: Using Readers to Generate New Information and Solve Complex Problems*
- *Getting the Word Out: Hands-On Marketing Tools for the Publisher and Managing Editor*
- *Will Video Kill the PDF Star?*

- *Usability and Information Design: Creating Author Instructions That Work*
- *Improving the Use of Reporting Guidelines at Your Journal*
- *Posts, Tweets, Channels, and Likes: Adapting Journal Content for New Technologies and Ways of Delivery*

Giving due credit. Increasingly, scientific endeavors require a multidisciplinary approach. Hence, the author list for scholarly publications has grown exponentially. This raises salient questions about authorship, microattribution, and contribution. Related issues regarding fairness and tracking impact have also been identified. These sessions dive deeply into the contentious topics, provide a status update, and describe practical approaches being used by some journals.

- *Authorship, Microattribution, and Social Engagement*
- *Contributorship*

Checks and balances. Open access aims to provide unrestricted information at no cost. Open peer review strives for transparency. Publishers provide a service but must maintain a sustainable business model. At these crossroads, opportunity and risk collide.

- *Open Access: What's New, What's Worked, and What Hasn't*
- *Open Peer Review*

Ethical choices. Don't be overwhelmed by daunting ethical issues. These related sessions will help you to overcome inertia by equipping you with insight for action.

- *CSE/COPE Joint Session: Misconduct Investigations—Balancing Collaboration and Confidentiality*

The CSE Short Courses: A Great Reason to Arrive Early in San Antonio

Nancy Devaux
Director of CSE Short Courses

Nancy Devaux

We are excited to offer four engaging short courses immediately before the 2014 CSE annual meeting in San Antonio. The short courses provide a unique opportunity to learn about relevant publishing topics from experienced leaders in the scientific and medical journal community and are conveniently held at the same venue as the annual meeting. The courses are specifically designed by and for editorial and publication professionals just like you! Attendees are encouraged to bring questions for discussion in a room full of like-minded people. Come to San Antonio a day or two before the annual meeting to learn from and with other journal editors, managing editors, manuscript editors, and publishing leaders. Increase the value of your CSE experience: expand your knowledge and skill set while sharing with your publishing colleagues.

Short Course for Journal Editors
(2–3 May 2014)
William Lanier, MD (editor-in-chief of *Mayo Clinic Proceedings*) will again coordinate the 2-day Short Course for Journal Editors. It is designed as an introduction for newly appointed editors and a refresher for experienced colleagues, providing a comprehensive survey of the roles and responsibilities of editors of scientific journals.

William Lanier, MD

There will be formal presentations on the fundamentals of editing, the editorial board, journal management, publishing ethics, operating business practices, and considerations for introducing a new publication or improving an established one. The group discussions are a key feature of the course because they provide an opportunity for detailed consideration of decision making, manuscript improvement, allegations of inappropriate behavior, and, most important, the issues that participants bring to the table.

Short Course for Publication Management (3 May 2014)
Course Coordinator Amy McPherson (managing editor of the *American Journal of Botany*) and her experienced faculty will present and reinforce efficient and effective methods of managing a journal. This 1-day course will address the wide-ranging role of managing editors and publication managers and the challenges that they face daily. This is the basic course for those new to journal management, but it is also designed to fill in the gaps and provide new ideas and perspectives to experienced managers. The keynote session of the course will be titled "Managing to Lead". Further sessions will address managing communication and people and organizing workflow; working with in-house and remote colleagues and an increasingly intergenerational workforce that has varied experience and technical expertise; working with editors-in-chief, associate editors, editorial boards,

Amy McPherson

authors, and reviewers; and perspectives of editors, authors, and reviewers. Discussions will include current controversies in ethics, conflict of interest, and open access.

Short Course on Publication Ethics (3 May 2014)

Patricia K Baskin

Elizabeth Blalock

Course Coordinators Patricia K Baskin (executive editor of *Neurology* journals) and Elizabeth Blalock (managing editor of *Journal of Investigative Dermatology*) have assembled a dynamic and experienced faculty to lead this 1-day course, which will address ethical issues that arise in journal publication. It will include such topics as conflict of interest, duplicate publication, piracy and plagiarism, human subjects, data misrepresentation, image fraud, authorship disputes, editorial independence, falsification of data, and research misconduct. Participants will learn the appropriate approaches for investigating suspected breaches of publication ethics and the uses of errata, retractions, expressions of concern, and sanctions. Case

continued

studies will provide examples for discussion, audience participation and questions will be encouraged, and resources for resolving ethical issues will be presented. Managing editors, journal staff, and those in management positions in the publication industry should find the course useful.

The Short Course for Manuscript Editors (3 May 2014)
Peter J Olson, ELS (senior copyediting coordinator at Dartmouth Journal Services), and his short-course faculty will offer an overview of the skills required for copyedit-

Peter J Olson

ing and substantive editing in the field of scientific–technical–medical publishing. The course is designed to equip novice

editors with the tools of the trade while providing seasoned editors with the information that they need to stay current and competitive. Featured sessions will include best practices in manuscript editing and Microsoft Word tips; table editing, including table structuring, data consolidation, and technical tips; figure editing; and split sessions addressing freelancing issues (for independent contractors) and ethical and legal issues (for office-based editors). The course will conclude with a roundtable discussion of various issues that manuscript editors face regularly.

- *Ethics Clinic: Legal Issues for Editors and Publishers When Confronting Misconduct Allegations*
- *Suspected Misconduct: Deciding When and How to Contact Institutions*
- *Predatory Publishers: How to Recognize Publishing Fraud*

Dewey decimal grows up. Although we rely on the library sciences for the classification and dissemination of our content, many editors lack the knowledge of how to leverage it or to collaborate with librarians and optimize their journal's presence in the literature.

- *Journal Indexing: What You Need to Know*
- *Libraries 101: Something for Everyone*

Beyond the printing press. Charting a steady course in a sea of change is not easy. Learn about the many options available for improving your product and workflow. Become informed to make the best choices for your journal.

- *Evolution of Article-Based (or Continuous) Publication: Workflow and Lessons Learned*
- *Technical Aspects of Publishing*

- *Reference/PDF Management Programs in Journal Publishing*
- *Behind the Scenes With Style Guides: Updates and Selections*

Special forces. Discover new tips on how to lead your diverse (and often remote) team. Leave these sessions with a few ideas or a new plan.

- *Is a Virtual Office Right for You?*
- *Planning for Continuous Operations in an Emergency*
- *Editorial Boards: Nuts and Bolts*

Teach each other. The CSE annual meeting is a forum for sharing successes. Whether we "build the bench", mentor by "reaching back", help authors to navigate publication, join forces with other editors, or come together to hear each other's stories, we all benefit when we teach each other.

- *Editorial Internships: Opportunities for All to Benefit*
- *Educational Strategies in Publication Ethics for Asian Authors*
- *How Did I Get Here? Perspective of a Volunteer*
- *Joint Publications Among Societies— Opportunities and Challenges*

- *Editorial and Publication Processes in Developing and Newly Industrialized Nations: Examples from Two International Journals*

Come on down to Texas, where we'll explore the journal's role in our complex society. Engage with experts and colleagues to meet the complex demands and pressures coming from numerous sources.

We look forward to seeing you in San Antonio!

2014 CSE Program Committee
Kristi Overgaard, Chair
Christine Casey, Cochair

Peter Adams	Kenneth F Heideman
Tony Alves	Todd Hummel
Patricia K Baskin	Anna Jester
Katherine Bennett	Milka Kostic
Philippa J Benson	Sandi McIntyre
Mary K Billingsley	Barbara Meyers Ford
Carolyn Brown	Sheehan Misko
Judith A Connors	Kimberly Mitchell
Tamer El Bokl	Julie Nash
Pam Erickson	Ingrid Philibert
Jennifer Fleet	Mary Beth Schaeffer
Michael Friedman	Angela Schmeckebier
Barbara Gastel	Sarah Tegan
Heather Goodell	

Calendar

2014

7–9 April   **International Society for Medical Publication Professionals annual meeting**. Arlington, VA. *www.ismpp.org*.

26–29 April   **Association of Clinical Research Professionals global conference.** San Antonio, TX. *www.acrpnet.org*.

27 April   **BELS (Board of Editors in the Life Sciences) examination.** Pacific Grove, CA. Registration deadline is 30 March. Contact: Leslie E Neistadt, BELS Registrar, 3437 Caroline Mall, Office 3088, St Louis, MO 63104; (314) 977-7811; *neistadt@slu.edu*; *www.bels.org*.

1–2 May   **American Society for Indexing annual conference.** Charleston, SC. *www.asindexing.org*.

2–5 May   **Council of Science Editors annual meeting.** San Antonio Marriott Rivercenter, San Antonio TX. Contact: CSE: 10200 W 44th Ave, Suite 304, Wheat Ridge, CO 80033; (720)881-6046; *www.CouncilScienceEditors.org*.

3 May   **BELS (Board of Editors in the Life Sciences) examination.** San Antonio, TX. Registration deadline is 12 April. See preceding BELS listing for registration information.

28–30 May   **Society for Scholarly Publishing annual meeting**. Boston, MA. *www.sspnet.org*.

6–8 June   **Editors' Association of Canada annual meeting.** Toronto, ON. *www.editors.ca*.

13 June   **BELS (Board of Editors in the Life Sciences) examination.** Split, Croatia. Registration deadline is 23 May. See preceding BELS listing for registration information.

13–15 June   **European Association of Science Editors general assembly and conference.** Split, Croatia. *www.ease.org.uk*.

15–19 June   **Drug Information Association annual meeting.** San Diego, CA. *www.diahome.org*.

8 October   **BELS (Board of Editors in the Life Sciences) examination.** Memphis, TN. Registration deadline is 17 September. See preceding BELS listing for registration information.

8–11 October   **American Medical Writers Association annual meeting.** Memphis, TN. *www.amwa.org*.

7–12 November   **Association of American Medical Colleges annual meeting.** Chicago, IL. *www.aamc.org*.

Information for Contributors

- *Science Editor* welcomes contributions on research on peer review, editorial processes, and ethics and other items of interest to the journal's readers.
- Please submit manuscripts as e-mail attachments and include the author's contact information.
- Submit material in the style recommended by *Scientific Style and Format*, with references in the order of citation.
- Submitted materials are subject to editing by the appropriate editors and copyeditor.

Send submissions and editorial inquiries to Patricia K Baskin, Editor-in-Chief, at *pkbaskin@gmail.com*.

In the Next Issue

- Transitioning to print from online-only
- Physician Payments Sunshine Act
- What editors need to know about CrossRef

Two Decades of Full-Service Journal and Book Production

Aptara's **Digital Journal Manager™**

the first digital production platform designed specifically for the journal workflow

Single-source management

peer review, editing, page layout, and distribution via print/web/mobile

‹› aptara®

The Industry's Digital Leader

Now publishing is as convenient as your smartphone.

You love your smartphone because it makes your life easier. Everything you need is in one convenient place—at your fingertips. Wouldn't it be great if finding publishing solutions could be so convenient? When you partner with Allen Press, it can be. Allen Press focuses on providing complete author-to-reader solutions for publishers. From manuscript submission to print and online delivery and everything in between, Allen Press provides the most comprehensive offering of integrated services for scholarly journal and association magazine production. Contact us today to learn how we can design the perfect combination of services for your needs.

allen★press

One call, one company, one simple solution.
www.allenpress.com | 800/627-0326