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From the Editors' Desks

President's message

I'm writing this fresh from my return from Barcelona, where EASE held a very successful seminar on peer review with the Facultat de Biblioteconomia i Documentacio of the University of Barcelona (p 87). Our thanks to Reme Melero and Ernest Abadal for organizing this. We hope to collaborate with the Facultat in Barcelona again with another workshop next year.

We also held our Annual General Meeting in Barcelona, which was less well attended, but we concluded all our business.

The Programme Committee met to continue planning for Tallinn and we're very pleased with the proposals we have received for parallel sessions (p 99). This promises to be an exciting and informative conference, so we urge you all to put the date in your diaries – not least because it will be EASE's 30th birthday next year, so Tallinn will be the focal point of our celebrations. Sylwia Ufnalska and Alison Clayson are arranging various activities: if you are interested in participating or contributing ideas, please contact them (sylwia.ufnalska@gmail.com, alison@clayson.org).

You should all have noticed some changes to the journal suggested by our new editor, Armen Gasparyan. We will be conducting an online survey soon to ask for your opinion as to the current format of the journal and how you would like to see it develop.

Updated cover for Handbook

The *Science Editors' Handbook* has an updated cover reflecting our new logo and visual identity. It can be printed from a PDF on the EASE website and simply inserted in the binder pocket on the current edition.

Handbook editor Petter Oscarson welcomes suggestions for topics and authors – email him at oikostech@ekol.lu.se. Authors do not have to be EASE members.

Contributions for November issue

Please send your contributions to the relevant editor (listed on the left) by 15 September.

European Science Editing is indexed in SCOPUS, SCImago Journal and Country Rank (SJR), SCIRUS, CAB International, Ulrich's Periodicals Directory, NewJour, Genamics JournalSeek, Chemical Abstracts Service (CAS), Electronic Journals Library (EZB), J-Gate, ZETOC, The British Library, Cornell University Library, The John Rylands Library of the University of Manchester, Geneva Foundation for Medical Education and Research (GFMER), Google, Index Copernicus Journals Master List, and RIN.

Editorial

Get indexed and cited, or perish

The phrase "publish or perish" has become a motto for successful functioning of individuals and research facilities. Scholarly journals seeking visibility and continuous growth of quality have also declared a policy of increasing the rate of publication of quality articles.[1] Indeed, for small and specialized journals, attracting high quality submissions has become a matter of survival. To maintain positions in indexing databases, most journals face a "change or perish" dilemma, which necessitates improving editorial work flow and switching towards higher publishing standards.[2,3]

Unarguably, editors should support their journals and provide a good service to their authors and readers. Increasing the submission rate and readability of publications is an essential part of their efforts. Even more important is the visibility of publications in numerous indexing databases, which leads us to the concept of "get indexed or perish".[4,5]

Entering and obtaining a high rank in Thomson Scientific, primarily in Science Citation Indexing Expanded (SciSearch), is just one option.[6] An important alternative, SCImago Journal Rank (SJR), seems more relevant to newly launched, small journals.[7] This relatively new metric is based on citation analysis of journals covered by SciVerse Scopus and contains information on the prestige of sources citing journal articles; the higher the rank of journals citing articles in a target journal, the higher the rank of the target journal. SJR and the average citation rate calculated by SCImago Journal and Country Rank correlate well with the established two-year impact factor by Thomson Scientific.[8]

Many journals not covered by Web of Science, but with relatively high values of alternative journal metrics (eg *Vascular Health and Risk Management*), are now displaying these rankings on their websites to attract quality submissions. *European Science Editing* is also committed to improve its rank by publishing articles citable by many other journals, including those with high scientific prestige.

Over the past few years, the *h* index has emerged as a relatively simple, easily understood, and validated bi-directional (evaluating productivity and citability) metric of scientific output.[9] It can be used to evaluate journals and can present information on the quantity and citability of journal articles. Values of the *h* index for any journal indexed by Scopus can be obtained from SCImago Journal and Country Rank. With this index, journal editors can provide an objective account of their efforts to publish high-quality articles of interest to authors of other journals. On the whole, older journals covering a wide range of scientific issues will have a higher *h* index than specialized, small, and relatively new journals. However, for evaluating the rate of increase of articles and their citations, the *h* index will be more suitable for smaller or specialized journals.

The *h* index of *European Science Editing* for the period of 2006–2010 is 3, meaning that the journal published at least three articles each year with at least three citations from journals covered by Scopus. Such a low value of the index is perhaps attributable to the relatively short time span of indexing (2006–2010) and a strong focus on readers' rather than authors' needs. It is hoped that the recent changes in the journal's indexing profile and more active approach towards a global audience[10] will raise the *h* index and other journal metrics provided by SCImago Journal and Country Rank and then, hopefully, by Thomson Scientific.

In summary, editors are in a position to improve the profile of their journals and to achieve higher values of traditional and alternative journal metrics. In a time of change the phrase "get indexed and cited, or perish" should be a driver for more active editorial work.

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Essays in Editing

Plagiarism: the emperor's new clothes

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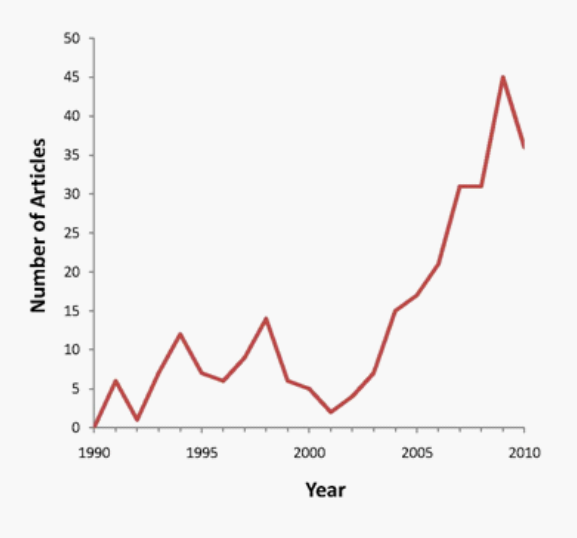
Abstract Many researchers across the world believe that plagiarism is blatant dishonesty tantamount to theft. Plagiarism can be divided into plagiarism of ideas and plagiarism of words. While no one doubts that plagiarism of ideas is unethical, different authors have differing views on plagiarism of words. Among the many reasons for committing plagiarism, laziness might be the most common cause among native English speakers, but non-English speaking authors may be re-using previously published texts because they are disinclined to sacrifice accuracy and quality for want of linguistic expertise.

Keywords Plagiarism detection software; publication ethics; scientific misconduct; duplicate publication

The number of articles published after 2005 that have the term "plagiarism" in their titles exceeds the number published before 2004 (see figure). Why must editors be concerned about plagiarism? Many researchers across the world believe that plagiarism is blatant dishonesty tantamount to theft. Why should anyone risk their credibility to commit such misconduct? We give a bird's eye view of plagiarism and discuss a number of relevant issues.

Various editorial organizations have defined plagiarism. The definition provided by the World Association of Medical Editors (WAME) is perhaps the most comprehensive:[1] "Plagiarism is the use of others' published and unpublished ideas or words (or other intellectual property) without attribution or permission, and presenting them as new and original rather than derived from an existing source. The intent and effect of plagiarism is to mislead the reader as to the contributions of the plagiarizer. This applies whether the ideas or words are taken from abstracts, research grant applications, Institutional Review Board applications, or unpublished or published manuscripts in any publication format (print or electronic)."[2]



Number of articles per year with the word "plagiarism" in their titles, 1990–2010

Plagiarism can be divided into two main categories – plagiarism of ideas and plagiarism of words (verbatim).[3] While no one doubts that plagiarism of ideas is unethical, different authors have differing views on plagiarism of words. Some researchers consider it as an indefensible sin, whereas others think that it is a forgivable slip or even acceptable under certain circumstances.[4-7]

Currently, English is *de facto* the language of science. However, it has not always enjoyed its current position and previously this role had been played by other languages including Greek, Latin, Arabic, Persian, and French. This shift in the *lingua franca* of science reflects the shift in world scientific centers from the East to the West, hence the aphorism *ex oriente lux*. To reach the maximum audience, researchers would rather present their work in English, the language in which most of the world's prestigious mainstream journals are published. Although most of these quality journals are published in Western countries, where English is the native language, many journals published in countries where English is not the mother tongue are also published in English to gain more visibility.[8-10]

Writing a manuscript in a language other than your own is not simple, particularly if you want to present highly sophisticated scientific information. Therefore, while laziness might be the most common cause of committing plagiarism of words among native English speakers,[11] the main reason for reuse verbatim of previously published texts by non-English speaking authors may simply be their want of linguistic expertise: they are disinclined to sacrifice accuracy and quality. Many non-native speakers disclose that when they can read a passage that better describes what they have done more fluently than they could, it is difficult for them not to borrow the text.[4,5] Furthermore, many authors, especially those trained and working outside the United States and western Europe, may plagiarize words because they are unaware that this is regarded as misconduct – they have never been taught that is the case. In many developing countries, plagiarism of words is

not an uncommon practice among academics, mostly for lack of any clear declaration that this action is a form of dishonesty.[4]

Plagiarism in the digital era

With the introduction of the internet, easy access to scientific resources and full text articles became possible. The simple copy/paste functions of word processors made plagiarism of words easier in the digital era.[12] However, the same technology also brought the necessary means for counter-attacking such misconduct by developing software programs for detecting plagiarism.

Many such programs are now available for detecting text similarities.[1] eTBLAST (http://etest.vbi.vt.edu/etblast3) and CrossCheck (http://www.crossref.org/crosscheck/index.html) are among the most well-known that are freely and commercially available, respectively. Currently many editorial offices use a software program to check plagiarism of words in either all or a random sample of submitted manuscripts, or only in those accepted for publication. When they detect a substantial amount of plagiarism, their response depends on many factors. Several organizations suggested how to handle plagiarism. Probably the most appropriate and practical guidelines are those presented by the Committee on Publication Ethics (COPE; http://www.publicationethics.org/resources/flowcharts). According to its guidelines, when deciding what action to take, an editor should consider seniority of the author(s), the amount of the copied text, and explanations provided by the author(s) in response to the editor's enquiries. The action may vary from a request to paraphrase part of the manuscript to outright rejection of the submitted manuscript (if plagiarism is found prior to publication) or retraction of the published article (when plagiarism is detected after publication—usually following a complaint by a reader or the plagiarized author).[13]

Other perspectives on plagiarism

Apart from its ethical issues, plagiarism and re-use – even of your own previously published text – may have other drawbacks. Among the different forms of redundant publications, one is "duplicate publication", which refers to publication of a paper with content that substantially overlaps that of an already published article.[3] Duplicate publication may jeopardize the body of evidence, at the heart of which is meta-analysis of published data, because if duplication is not detected, the duplicate (or even multiply-published) similar results influence the pooled results of meta-analyses.[14]

Plagiarism of ideas is not controversial, and all researchers consider it as blatant inexcusable misconduct. Plagiarism of text and recycling of words are also unacceptable where novelty and the essence of the work are in the eloquence and the wording, for example in the humanities and literature.[6] Originality of manuscripts in many other disciplines seriously depends on its content, regardless of how eloquently (or obscurely) it is presented. Therefore, while in many fields such as literature and humanities, it is important for authors to describe what they feel through accurately selected words, the authors of a scientific article at best act as merely honest reporters who present their observations according to well-established standards. Textual eloquence is relevant only insofar as the text should be comprehensible to readers. Many authors ask themselves why, if the originality of their scientific article needs to be in its content rather than its wording, should they not borrow part of a well-written phrase or even a whole sentence (with appropriate citation of course) from another published article to better express what they want to say? The lack of linguistic expertise that may lead writers to re-use text is not necessarily a sign of "academic laziness".[11] Obviously, authors who re-use text should understand and interpret the original text correctly.[15]

In some cultures, plagiarism is not considered misconduct. This belief has a long history. We can find interesting instances of plagiarism that would be considered misconduct nowadays but resulted in great progress in antiquity. One example is the allegation, by Stephen of Antioch in the 12th century, that the famous Tunisian doctor Constantinus Africanus (1020–1087) was not the real author of the book *Liber Pantegni*, which had an influential effect on the flourishing of the first modern medical school in Western Europe – Schola Medica Salernitana. Soon after this allegation, it became known that the book was a translation of *Liber Regalis*, which was written by an Iranian physician, Ali Ibn Abbas Al Majoussi (Haly Abbas).[16]

Looking ahead

It seems that currently the language barrier may be an important cause of plagiarism of words among authors whose first language is not English. Although many initiatives such as the AuthorAID projects help non-English-speaking authors express themselves to some extent,[17] the future may be completely different. Soon we will have machine translation good enough to be used for real-time translation of scientific texts. Introduction of those machine translations will change the face of our practice regarding plagiarism. Then, we will need to develop a new definition for plagiarism and new methods of detection and strategies to cope with it..

Competing interests HM is a native English speaker; FH is not. FH is Vice-President of the World Association of Medical Editors (WAME).

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Commentary: On plagiarism, laziness, and scholarship

Habibzadeh and Marcovitch[1] speculate that laziness is the most likely cause of plagiarism of words amongst authors who are native English speakers, whereas lack of linguistic expertise is likely the cause for non-native speakers. I suspect that many readers will agree with the authors' position. After all, how else might we explain the failure of a highly educated native speaker to generate original text in their own native language and, instead, choose to misappropriate the work of others? As a non-native English speaking college professor and as someone who has been interested in text plagiarism for many years, I have asked myself that very question each time I encounter plagiarism in the work of my native English speaking undergraduates. Frankly, there is no doubt in my mind that a certain degree of laziness plays a role.

As with many cases of plagiarism in biomedical journal articles, student plagiarism in North American academic institutions often involves a failure to properly paraphrase others' text. Many students end up passing off as their own writing relatively long strings of text from other sources with little or no modification and sometimes without attribution. When confronted about their plagiarism, many of these students will indicate that they didn't know that they had to thoroughly modify the original text even when the source of the original is acknowledged. Alternatively, they will also often complain that they could not find any other acceptable way of expressing the meaning of the original material or that there are just so many ways to express certain ideas or concepts. Perhaps not surprisingly, a similar set of excuses is sometimes offered by author-scientists who plagiarize.

That laziness is an operating factor in student plagiarism is suggested by research that seems to show that, in fact, most students know how to paraphrase correctly.[2] For example, when students in one study were given a short, easy to read and understand paragraph to paraphrase, they tended to paraphrase it appropriately. However, when another group of students was given a paragraph that was more difficult to read, more of them tended to misappropriate text from the original paragraph, and the extent of their misappropriation was more extensive. To properly paraphrase the more difficult paragraph while preserving the meaning of the original would have cost the students more time and a considerable amount of additional mental effort. A more economical way of accomplishing the task is to simply re-use more of the original material, and that is precisely what these students end up doing. Interestingly, when the same study was carried out with a sample of college professors, a similar but less pronounced trend was observed in their data – that is, college professors, regardless of their discipline, tended to misappropriate words from the original paragraph when the text was more technical.[3] My sense is that the misappropriation occurred, in part, because the professors, like the students, wanted to ensure the quality and accuracy of their paraphrases, but in a more economical way.

Struggling to generate good writing

It seems to me that the conditions under which non-native speakers find themselves when they attempt to write in English are analogous to those of the study participants who had to paraphrase a difficult to read paragraph. Both groups must struggle to generate good writing based on others' technical works that are difficult to process at a cognitive-linguistic level. If we assume that laziness is operating in those native-speaker study participants, is it not reasonable to assume that laziness is also operating in non-native speakers when they opt to misappropriate the words of others? In writing papers for publication, researchers who are non-native speakers of English experience a far

greater range of obstacles than do their native English speaking counterparts. Linguistically inexperienced, non-native speakers of English have not yet fully mastered the mechanics of English grammar and syntax, let alone the many unique technical expressions used in their disciplines to describe highly complex phenomena or novel processes. This deficiency alone incurs a greater amount of time, mental effort, and use of resources that native speakers do not need to tap.

Because non-native speaking authors who plagiarize probably vary in their levels of English proficiency and in their availability and accessibility of resources to help them write their journal articles, a number of questions arise. For example: could experienced non-native English speaking researchers with adequate proficiency in English misappropriate others' work out of levels of laziness similar to their less experienced native speaker counterparts? Consider how text plagiarism, whether by native or non-native speakers, occurs in journal articles. In many such cases the plagiarism is confined to sections of a manuscript rather than throughout the manuscript, and these are not always in the most technical areas (the Methods section). Given such patterns of plagiarism, how is it that these non-native authors have the skills to generate good English in most sections of a paper, but plagiarize other sections, some of which are perhaps not even the most challenging to write?

A difference in laziness?

Heitman and Litewka's observations notwithstanding,[4] and as Habibzadeh and Marcovitch clearly show,[1] how is it possible that so many papers have now been written in the area of plagiarism, yet still authors continue to claim ignorance and engage in this type of misconduct? Given these considerations, not only am I not convinced that there is a difference in laziness between these linguistic groups, but I would expect that if laziness is a factor in most text plagiarism cases in the sciences, it probably occurs in roughly equal degrees in both groups, for there is no reason to believe that one linguistic group is any more driven, productive, or lazy than any other group.

I agree with Habibzadeh and Marcovitch that the originality of data or observations (that is, research integrity) should be the prime concern in the sciences.[1] However, while most textual plagiarism might not rise to the level of research misconduct, such behaviour often crosses the threshold of scholarly misconduct. After all, each time the words of others are used in a way that misleads the reader as to the true authorship of those words – even if a citation is provided – plagiarism has been committed, plain and simple. Such text plagiarism might be inconsequential for the integrity of the science reported, but it is a significant lapse in ethical scholarship. Most editors who wish to maintain high standards for their journals will insist not only on scientific originality but also on originality of scholarship and should, therefore, object to text plagiarism.

The rules of scholarship

While the rules of scholarship are largely universal across academic disciplines, the nature of scientific writing, especially in traditional research articles, may at times preclude the type of strict paraphrasing expected in the humanities. This is because a significant portion of the scientific terminology and some of the phraseology used are unique and in many cases cannot be substituted with synonyms or with equivalent expressions. Thus, in some sections of journal articles, particularly in methodology sections, the limited re-use of others' phrases that are part of highly technical descriptions might be inevitable and even desirable. That said, I admit to feeling very uncomfortable with the suggestion that the rules of scholarship in the sciences should be further relaxed with respect to re-use of text. Writing for me has never been easy as it takes me considerable time and effort to generate a half decent piece of written material. As such, I certainly would not appreciate seeing portions of my own writing misappropriated, particularly when the misappropriation is likely to have been driven by some degree of laziness.

In sum, Habibzadeh and Marcovitch make some very insightful points about plagiarism.[1] However, I have a clear difference of opinion with some of their positions. Most importantly, I much prefer to see a call for editors and others to use common sense and flexibility when dealing with non-native speaking authors, rather than suggesting a differential application of traditional rules of scholarship. Science is already losing credibility in the public's eye. Consequently, any effort at lowering of our scholarly standards does not strike me as being in our best interests.

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Competing interests MR is a non-native English speaker who now mostly uses that language. He is the author of *Avoiding plagiarism, self-plagiarism and other unethical writing practices*, available at http://ori.dhhs.gov/education/products/plagiarism/

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Scientific discourse and contrastive linguistics: explicitness and the concept of reader/writer responsible languages

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Abstract Languages and the cultures they represent differ in the extent to which writers feel responsible for making themselves clear and to which readers are expected to puzzle through what has been written. To write explicit statements may be regarded as polite in one culture and patronising in another. This is the third article in a trilogy on scientific rhetoric; previous articles have discussed creating a research space and hedges.

Keywords Metadiscourse, explicitness, Asian languages/culture, European languages, reader-responsible, writer-responsible, rhetoric

Contrastive rhetoric analyses of scientific discourse have drawn attention to the existence of differences in the level of explicitness between languages. English is usually said to lie at the higher end of the scale of explicitness of text organisation, clarity, and coherence: English readers indeed expect and require landmarks of coherence and unity as they read, and writers need to provide these transitional statements.[2-7] Texts written in English thus reflect a more reader-oriented attitude: explicit statements are regarded as polite to readers and implicitness as impolite. When compared with the scientific rhetoric of Anglo-American writers, writers in other languages are much less inclined to regard explicitness as their responsibility.[8]

In Japanese,[8] Korean,[9] and Chinese[10] scientific writing, texts are characterized by non-linearity; they generally lack transitions and illocution markers (words used to show the author's stance on a given subject), and readers are expected to piece together the thread of the writer's logic that binds the composition together so as to make a coherent text. According to John Hinds, writing that is too explicit is not valued in Oriental languages (Chinese, Korean, Thai and Japanese) [8,11,12]; the task of the writer, argues Hinds, is not necessarily to convince but rather to stimulate readers to think for themselves, consider the observations made, and draw their own conclusions. Despite the respect that his research has enjoyed among linguists and contrastive rhetoricians, some critics have pointed out that Hinds bases his generalizations about Japanese expository prose on analyses of articles from one Japanese newspaper. Critics also assert that different genres may require different styles. This may be true, but Hinds' point is that there is a difference in the perceived coherence of Japanese and of Anglo-American texts, and this is an important and interesting issue.

Research articles written in Spanish[13] and texts written in Portuguese[14] are also negatively marked as to the presence of cohesive order to indicate the discursive logic of texts. A much lower density of periphrastic links, previews, and reviews has also been noted in scientific papers written in French[15,16] and in Slovene[17] and German[18] academic writing. Basing his arguments on the analysis of textbooks and high school essays, Michael Clyne argues that form is of greater importance in educational discourse in English-speaking countries than in German speaking ones, where content seems more important.[19]

In another paper, Clyne compared the linear organization of academic papers and articles written by English-speaking and German-speaking linguists and sociologists, and examined the hierarchical development of texts, the development of arguments, the symmetry of text segments, and the uniformity of formal structure.[18] He found, *inter alia*, that writing by English speakers favoured a linear development and a greater use of "advance organizers" (used to clarify the organization of a text), whereas the writing of German speakers favoured digression and scattered organizers, if they used them at all. Clyne explains the differences in terms of cultural differences in attitudes about text readability: English-speaking writers strive to make their texts readable, whereas German writers emphasize content over form. Clyne formulated the hypothesis that the German discourse type, at its most striking, can be characterized as "cooked spaghetti",[20,21] a style which stands in sharp contrast to its linear Anglo-American counterpart. Clyne argues that to describe an academic text as "easy to follow" would be complimentary in an Anglo-Saxon academic context, but might be intended as an insult among German academics whose texts are dominated by the primary function of Wissensdarstellung (knowledge representation).[5]

Along the same lines, Ventola and Mauranen[22] and Mauranen[23] remark that Finnish scientists use less metalanguage (the use of language to describe or analyze language or to make statements about statements) for organizing texts, and show a more negative kind of politeness and a greater tendency towards implicitness than Anglo-American writers do. Some might consider Finnish prose to be aloof and uncaring toward the reader, but Mauranen claims that the Finnish style can be interpreted as polite and non-patronizing to the reader – what is obvious is left unsaid.[23]

Scientific prose in Slavic languages also tends to be more concerned with presenting knowledge than addressing the reader,[24-26] or, as Yakhontova aptly puts it in her study of conference abstracts written by Russian and Ukranian academics in comparison to those written by Anglo-American scholars, Slavic academic writing tends to "tell" rather than "to sell".[27] This does not imply a lack of cooperation between the writer and the reader; it rather means that the expectations are different: the

reader is expected to invest effort in following the writer's line of presentation.

With this trilogy on scientific rhetoric (previous articles published in *European Science Editing* in the past year have discussed creating a research space[28] and hedges[29]), I have tried to present linguistic, structural, and cross-cultural information that will be not only interesting but also useful to readers of *European Science Editing*. As with any discipline, linguistics has its own jargon, which I had to use to illustrate the points I wanted to make. I hope this specialized language did not prevent readers from enjoying these short – and necessarily simplified – essays on academic writing.

This essay is based on the review article cited as reference 1.

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Viewpoints

On text reuse and the scholarship of science

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Abstract On the basis of existing guidance, it is proposed that reuse of a limited number of one's own or of others' phrases and perhaps even longer word strings should be permissible only when the material copied is composed of highly technical descriptions of complex processes or phenomena, which are most often found in methodology sections. Reuse of simpler non-technical text is not consistent with excellence in scholarship and should be strongly discouraged, particularly amongst native speakers of the language of publication.

Keywords Text reuse; plagiarism; self-plagiarism; authorship; publication ethics; scholarship; research misconduct.

Composing a scientific journal article can be an exceedingly demanding task even for those experienced researchers who are also native speakers of English – the *de facto* language of science. A manuscript's grammar and syntax must approach near perfection, and the language must be exceptionally clear and concise and devoid of any slang and unnecessary jargon. Moreover, authors must also follow basic principles of scholarship, which include, but are not limited to, the use of appropriate evidentiary support for each claim made and of footnotes or citations to identify the source of others' ideas or words. Regarding the reuse of others' words, the main concern of this paper, authors are expected to observe two general standards:

When paraphrasing others' work, an author must thoroughly modify the original text in a way that the paraphrased version acquires the author's own "voice" while conveying the exact same message as the original. The source from which the information is derived must be identified in accordance with the style of writing being used (Vancouver system, APA style, Chicago style, etc) by using footnotes or parenthetical or other forms of citation that clearly indicate the origin of the material used. In those cases in which paraphrasing the original would be so difficult that the paraphrase runs the risk of altering the meaning or fails to capture the unique elegance or essence of the original, we can use the original language in our paper by enclosing the verbatim text in quotation marks and providing a citation or footnote that clearly identifies its origin.

Unlike in the humanities, a number of constraints in the sciences make it difficult to apply and/or enforce these two basic rules. Scientific writing is often laden with unique terms and phrases for which there are no substitutes.[1] Consequently, sometimes it is very difficult, if not impossible, to thoroughly paraphrase certain segments of others' work. Consider the following short paragraph:

> Mammalian histone lysine methyltransferase, suppressor of variegation 39H1 (SUV39H1), initiates silencing with selective methylation on Lys9 of histone H3, thus creating a high-affinity binding site for HP1. When an antibody to endogenous SUV39H1 was used for immunoprecipitation, MeCP2 was effectively coimmunoprecipitated; conversely, αHA antibodies to HA-tagged MeCP2 could immunoprecipitate SUV39H1.[2]

Even authors who have a good conceptual understanding of the general area of research from which the paragraph was drawn and who are also native speakers of English will find it difficult to paraphrase. For the growing segment of the scientific community who are non-native speakers of English, paraphrasing in general can be most challenging, let alone paraphrasing complex, scientific prose.

To further complicate matters, some non-native English speaking authors seem to lack the necessary training in relevant aspects of scholarly writing, such as the need for textual originality[3] and transparency with respect to the sources from which they derive their own work.[4] Some of these authors may have been taught a set of values related to using and to acknowledging others' work that is fundamentally different from the values associated with current English-language scientific scholarship.

Certain traditions in science writing play an important role in authors' ability to express themselves in a manner consistent with standard scholarly practices. For example, in scholarly work in the humanities one can frequently find portions of others' verbatim text appearing in quotation marks. This technique is used for a variety of purposes, such as highlighting or further elucidating the quoted material, or when an author wishes to emphasize a phrase, sentence, or paragraph that would help justify a particular position or counter-argument. Whether it is a matter of style or tradition, quoting others' text is an uncommon practice in the sciences[5] that perhaps represents an expectation that authors should be able to articulate others' ideas in the authors' own words.

How much text reuse is acceptable?

It is not surprising, then, that so many cases of text plagiarism occur in the scientific literature.[6] Putting language ability issues aside for the moment, the question of how much of others' verbatim text may be reused in one's publications and without attribution is one that sorely needs consensus. For example, some authors believe that copying a few sentences that do not embody an original idea is of "marginal importance"[7] relative to the misappropriation of ideas. These authors also question whether both types of plagiarism should be treated in the same fashion.[7-9]

Others, who agree that distinctions should be made between the two types of plagiarism, take a more conservative approach and urge that the plagiarism label be used not only for the act of copying verbatim sentences from other sources, but also for the act of lightly paraphrasing them by changing only some of the words.[10-11] I note that at least some student writing guides in the sciences similarly caution readers about proper paraphrasing as a way of avoiding plagiarism.[5,12]

The ideal, thorough paraphrase that we have come to expect is sometimes simply not possible – or even desirable – with the type of language often found in scientific journal articles. The question arises: when a thorough paraphrase is not feasible, how much text should authors be allowed to reuse? Few guidelines specifically address this important question. A guideline from the United States Office of Research Integrity (ORI)[13] is helpful in this regard. ORI's working definition of plagiarism states: "Substantial unattributed textual copying of another's work means the unattributed verbatim or nearly verbatim *copying of sentences and paragraphs* which materially mislead the ordinary reader regarding the contributions of the author". The definition provides specific additional guidance on acceptable text reuse: "ORI generally does not pursue the *limited use of identical or nearly-identical phrases* which describe a commonly-used methodology or previous research because ORI does not consider such use as substantially misleading to the reader or of great significance" (emphasis mine).[13] ORI allows for a limited amount of copying of phrases containing technical language, but not of sentences and paragraphs in a way that misleads the reader as to who the true author of the borrowed material really is.

Although ORI's definition is only applicable to instances of potential plagiarism in work that has been funded through the United States Public Health Service agencies, many US academic institutions, agencies, and professional organizations have adopted it in their research misconduct policies. The fact that a significant number of authors appear to stretch the concept of permissible text reuse from a limited number of phrases to entire sentences and paragraphs is perhaps the main reason for the explosive proliferation of articles on plagiarism.[9]

Perhaps the single most important dilemma for editors and authors when it comes to text reuse is the lack of an operationally defined guideline for when "limited use of identical or nearly-identical phrases" crosses the line from acceptable to unacceptable. At least one author has suggested a specific word count of 48 consecutive words for plagiarism,[14] but this recommendation has never been enforced or even encouraged in any official capacity. Recently, Elizabeth Wager of the Committee on Publication Ethics (COPE) addressed this most difficult issue in a discussion paper that proposes a quantifiable distinction between major and minor plagiarism.[15] While acknowledging the arbitrary basis for establishing any numerical threshold, she suggests that lapses that would qualify as major plagiarism include "verbatim copying of >100 words of original material in the absence of any citation to the source material". For minor plagiarism, Wager suggests "verbatim copying of <100 words without indicating that these are a direct quotation from an original work (whether or not the source is cited), unless the text is accepted as widely used or standardized (eg, the description of a standard technique). Minor plagiarism would also include "close copying (not quite verbatim, but changed only slightly from the original) of significant sections (eg, >100 words) from another work (whether or not that work is cited)".

Although Wager's recommendations are an important and much needed step, they will probably need to be further elaborated because of the many clever forms in which inappropriate text reuse can occur that do not fit neatly into these preliminary categories. For example, with respect to the third guideline on minor plagiarism, consider an author who stitches together an entire article by misappropriating several paragraphs from one or more papers with one or two word substitutions per sentence and without attribution. In terms of the seriousness of the plagiarism, how would we compare such extensive copying to an author who has copied verbatim and without attribution two segments of 100-110 words in length? Again, the different ways in which text misappropriation can occur illustrates the difficulties with generating comprehensive, yet practical, guidance for authors and editors.

The problem of excessive text reuse from other sources is further compounded by the fact that some researchers, including native speakers of English, genuinely believe that as long as a citation is provided, segments of text from other sources may be reused with little or no modification.[13,16] But, except perhaps for text segments that consist, to use ORI's wording, of "identical or nearly-identical phrases which describe a commonly-used methodology", such extensive reuse seems to me to fall short of scholarly excellence. I left out the phrase "or previous research", which is part of ORI's statement that was quoted earlier. In my view, the reuse of short amounts of others' verbatim text about previous research may, in some cases, be appropriate – but only when the language in question is technically challenging. Such language may be found throughout a paper, including the literature review, but it is most commonly found in the Methods section. Not all methods sections are challenging to rewrite, and even those that are highly complex may contain portions of text that are not difficult to paraphrase.

Most importantly, there seems to be an underlying assumption that just because a paper has been published, it cannot benefit from additional clarification or further elaboration.[17] As most readers of the biomedical literature know full well, lapses in clarity, omission of key details, and other ambiguities in the writing are fairly common in journal articles. Rather than reusing the same written material, authors should, at the very least, view their new manuscript as a unique opportunity to possibly improve and further clarify what has already been written. Of course, such an approach is meaningful when the manuscript is being prepared by experienced authors who also have a full command of English.

Reusing portions of others' literature reviews is problematic for several reasons. Deception is associated with not having actually written the material, and the author may not even have read the articles cited in the misappropriated portions of the review. Perhaps with some exceptions, citing a particular work represents a declaration to the reader that we have read that work and that we are summarizing or distilling its relevant findings in our own words – unless, of course, we note otherwise by the use of a footnote or some other convention that informs the reader of a different situation. More importantly, literature reviews that are constructed, in part, as a patchwork of text from other sources could result in potentially serious misrepresentations of the scientific record.[6]

Reuse of own published text

Perhaps an even more contentious issue is the question of the extent to which authors may reuse their own previously published text in new publications. The practice appears to be relatively common, with at least one study showing that 60% of authors sampled reused at least 10% of their own text in subsequent publications.[18] As with traditional forms of plagiarism, the practice of recycling one's own text probably ranges in scope from the reuse of a few stock phrases to the reuse of several paragraphs of a journal article.[18,19]

Reusing certain key phrases or expressions is probably unavoidable and perhaps even desirable, as when the reuse occurs with portions of a previously published method section or some other highly complex description or process elsewhere in a paper. On the other hand, changing precise descriptions merely for reasons of appearing original risks altering their meaning in some subtle, but not inconsequential, way. However, the same cannot be said for literature reviews or discussion sections. Substantial text reuse in these usually non-technical sections not only falls short of scholarly excellence, it suggests intellectual laziness. Recycling our own text is not nearly as offensive as reusing others' text, but the practice conveys "poor scholarly etiquette" and may even trigger charges of misconduct if the reuse is sufficiently widespread.[20] Perhaps for these reasons limits for textual overlap had been suggested in the past, ranging from 10% to 30%. A recent model for determining whether self-plagiarism of text has taken place uses a 10% cut-off,[21] and a consensus may be emerging in the medical editing community for a 10% maximum reuse.[22]

While the reuse of one's own published text is far less serious than reuse of others' text, the increasingly multi-author nature of scientific publication can make matters more complicated for those who engage in this practice. Consider the researcher who was part of a research collaboration that published extensively but now joins a rival group working on the same type of research problem. Would this researcher be justified in reusing substantial portions of text that had been previously published with the old collaborative group, even if she or he had written the earlier material? Would the right to reuse previously co-authored text depend on his or her relative position in the lab (post doc, fellow, head of the lab)? And what if she or he didn't do any of the writing? As a coauthor of previously published papers, is the researcher still entitled to reuse any portion of the writing from papers produced with the previous collaborators or from grant proposals, or other relevant documents? These are difficult questions and their resolution will likely depend on a detailed analysis of the many relevant variables present in each individual case beyond the crossing of a simple minimum percent threshold of text reuse.

Text reuse and English proficiency

An important concern is the question of how to handle text reuse committed by non-native English speakers. For example, should such authors be automatically held to more lenient standards of text reuse from their own publications? We often hear how limited English skills are used as a rationale for authors' tendency to misappropriate text.[23] As a group, these authors are probably at a linguistic, as well as at an economic, disadvantage relative to their native English counterparts. However, as I have argued elsewhere in this issue,[24] I believe that we commit a fundamental error when we assume that all non-native English speaking authors who plagiarize are, in fact, operating with the same low levels of linguistic and economic resources or that in all such cases the misappropriation is being committed for purposes of "scientific English".[15] There are probably vast within-group differences in terms of ability to write in English, availability of resources to help them produce high quality manuscripts in English, and even motivation for and commitment to scientific truth. I urge flexibility in dealing with this group of authors but also caution that each case of a suspected ethical lapse should be judged on its own merits.[17]

Conclusion

Text reuse of the copy-paste type is not generally consistent with a "best practices" approach to scientific writing. While there is some practical justification for reusing limited amounts of technical text, the reuse of non-technical text, even if it is from our own published work, should be actively and unambiguously discouraged.

In those cases in which it is clear that the reuse was committed for purposes of "scientific English" and where the authors have very limited resources to address this problem, then perhaps a more lenient approach should be followed. If the offense is committed by an experienced native-speaker who should have known better, a less forgiving approach ought to be in order.

Why should we not allow non-native English speaking authors to "borrow part of a well-written phrase or even a whole sentence (with appropriate citation of course) from another published article to better express what they want to say?"[9] The simple answer is that text reuse that is accompanied by a citation but not enclosed in quotation marks misleads the reader about the true authorship of that text. Given that accuracy and intellectual honesty are some of the hallmarks of scientific work, we should be encouraging those traits in every facet of the scientific process, including the dissemination of our findings. Bypassing long-established scholarly traditions and allowing authors to freely reuse their own or others' text,

even if only in small portions, is not consistent with a true scientific spirit. A more honest and transparent strategy other than paraphrasing, is to reuse text by enclosing it quotation marks and adding a citation to identify its origin. The biomedical editorial community should begin to consider encouraging the use of this option. If authors were more comfortable about using quotations, perhaps cases of text plagiarism would finally begin to decline.

Competing interests MR has written an online instructional resource, with support from the US Office Research Integrity, to help authors avoid plagiarism and other unethical writing practices.

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How I heard of EASE

I first heard of EASE in 1995 when I joined the Centre Technique pour la Cooperation Agricole et Rurale in Wageningen, NL, as an interim generalist consultant. One of my multifarious pick-up-the-pieces tasks after the sudden departure of a publications manager was to fast track the editing and publication of several conferences' proceedings. They were dallying unmanaged in a pipeline, and I was told to subcontract the editing to a Mr Brian Mills somewhere in southern Massif Central, as he knew the topics in question. A wily and wise editor, Brian happily submitted to my management, advising me all the time how to manage him and instructing me, a novice, in the editing process. Wonderful! He was an active member of EASE, and amongst his many counsels was that I should sign up myself.

I demurred, never having held a blue pen in my life. Now, 16 years on, I survive the ends of my months as a translator and (sometimes scientific) editor, especially when the World Bank and several governments find no need for my mediating, writing, and filming skills. Now fully motivated to develop my editing skills, I joined Mediterrean Editors and Translators (Barcelona) on the advice of a client in Montpellier. Splendid advice. A few weeks ago, in MET, I learned of the Barcelona seminar on peer review, and that prompted me to put right my omission of years ago.

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The h index as a research performance indicator

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Abstract In 2005, Jorge Hirsch introduced a new indicator for quantifying scientists' research output. His h index was proposed as an alternative to other bibliometric indicators such as citations per paper. It is based on a scientist's lifetime citedness, which incorporates productivity as well as citation impact (an all-in-one metric). This article gives an overview of different contexts of the h index application, its advantages and disadvantages, h index variants, its convergent validity, and future directions of research.

Key words Bibliometrics; impact factor; *h* index; science editing

The essence of scholarship is communication.[1] Scientists having important new research results publish them in the international journal literature.[2] Each new result is positioned with respect to the results published by others through the process of citing. As only valuable results are cited, the number of citations a paper receives reflects its usefulness to others.[3] Thus, scientific papers contain two quantities – "the increment of new science and the credit for its discovery".[4]

The most obvious tool available to measure quality in science is the publication list of a scientist – the number and the impact of his/her publications. Measuring quality of scientific research becomes even more important in a time when scientists increasingly compete for limited funding. In 2005, Hirsch introduced a new indicator for quantifying the research output of scientists.[5,6] This index was proposed as an alternative to other bibliometric indicators such as citations per paper and is defined as follows: "A scientist has index *h* if *h* of his or her N_p papers have at least *h* citations each and the other $(N_p–h)$ papers have ≤*h* citations each".[5] The *h* index can now be calculated automatically for any publication set in Web of Science (Thomson Reuters) and SciVerse/Scopus (by Elsevier). Abramo et al[7] offer subject-specific "benchmarks for those who wish to compare their individual performance to those of their colleagues in the same subject field". However, the *h* index differs, depending on what publications a database covers and analyzes.

Applying the *h* index

The *h* index is based on a scientist's lifetime citedness,[8] which incorporates productivity as well as citation impact (an all-in-one metric). All papers in a publication set which have at least *h* citations are called the "Hirsch core"[9]; publications in the core have the greatest impact.[10] The *h* index is approximately proportional to the square root of the total citation counts and linearly proportional to the total number of publications.[11] To get a higher *h* index, an individual needs at least 2*h*+1 extra citations.[12] For example, to increase the index from 4 to 5, at least 9 citations are needed. The higher the *h* index the more citations are needed to increase it.[11] It means that the difference between higher *h* index values (25 and 26, for example) is much greater than between lower values (4 and 5, for example).[13]

Currently the *h* index is used to measure research output not only of scientists but also research groups,[14] scientific facilities,[15] and countries.[16] The index can be calculated in the same way in all cases or based on successive *h* indices at higher aggregate levels[17]: "The institute has an index h_2 if h_2 of its *N* researchers have an h_1-index of at least h_2 each, and the other $(N–h_2)$ researchers have h_1-indices lower than h_2 each".[18] Braun et al[19] recommend using the *h* index to measure journals' output as an alternative to the impact factor provided by Thomson Reuters[20]: "Retrieving all source items of a given journal from a given year and sorting them by the number of times cited, it is easy to find the highest rank number which is still lower than the corresponding times cited value. This is exactly the *h*-index of the journal for the given year."

The considerable impact of the *h* index on both bibliometricians and on the global scientific community is due to its simplicity and intuitive meaning.[11] In recent years many studies analyzed different aspects of the indicator.[6,21-29] Up to the end of 2010, the paper by Hirsch[5] had been cited approximately 660 times, reflecting its popularity.

Disadvantages of the *h* index

There are some disadvantages of the *h* index. Combining publication and citation rates in one index is sometimes criticized.[30,31] "The problem is that Hirsch assumes equality between incommensurable quantities. An author's papers are listed in order of decreasing citations with paper *i* having *C*(*i*) citations. Hirsch's index is determined by the equality, *h*=*C*(*h*), which posits equality between two quantities with no evident logical connection".[30]

Other critical points are the following.[31]

- Like most pure citation measures the *h* index is field-dependent.
- It can be manipulated by self-citations.
- There is a problem of finding reference standards.
- There are many more versatile indicators for research evaluation.
- It is not easy to collect all data necessary for determination of the *h* index. Often a scientist's complete publication list is necessary to discriminate between scientists with the same names (a precision problem).

Some of the disadvantages[31] are more specifically related to the *h* index itself.

- The index disadvantages newcomers since their publication and citation rates are relatively low.
- It allows scientists to rest on their laurels since the number of citations received may increase even if no new paper is published.

• It is useful for comparing best scientists only. Its power for distinguishing amongst average scientists is not acceptable.
• It lacks sensitivity to performance changes: it can never decrease and is only weakly sensitive to the number of citations received.

Moreover, the *h* index does not take into account details of a citation record.[22,32] As the *h* index captures only a part of the record, scientists with substantially varying records can present with the same *h* index value: "Think of two scientists, each with 10 papers with 10 citations each, but one with additional 90 papers with 9 citations each; or suppose one has exactly 10 papers of 10 citations and the other exactly 10 papers of 100 each".[32] To overcome this limitation of the *h* index, Bornmann et al[33] introduced an approach providing additional information to the *h* index: h^2 lower, h^2 center, and h^2 upper allow quantifying three areas within a scientist's citation distribution: the low impact area (h^2 lower), the area captured by the *h* index (h^2 center) and the area of publications with the highest visibility (h^2 upper).

The *h* index variants

Numerous additions and variants of the *h* index have been proposed in recent years. Of these, the *g* index by Egghe[34] has received most attention, while many others, including the *e* index by Zhang[35] and the *n* index by Namazi and Fallahzadeh[36], still await validation. The *g* index is the highest number g of papers that together receive g^2 or more citations, meaning that $g \geq h$.[34] The *g* index weights highly cited papers more than the *h* index.[27] Hirsch himself proposed ħ ("hbar") as a *h* index variant defined as the number of papers of an individual with citations greater than or equal to the ħ of all co-authors of each paper, taking into account the effect of multiple co-authors.[37]

We determined the extent to which different variants of the *h* index add information not provided by the original index.[38-41] Though the proposed variants differ from the *h* index in many ways, they still correlate with the original index. Importantly, the results of the first meta-analysis on the *h* index and its variants yielded a strong correlation between the *h* index and its 37 variants (ranging between 0.8-0.9), suggesting that most of the proposed variants are redundant.[41] However, some variants are less strongly correlated with the *h* index. A good example is the *a* index measuring citation intensity in the *h* core (papers with at least *h* citations).[42] Also, based on factor analyses, we demonstrated that there are two independent types of the *h* index variants: those describing the number of papers in the most productive core*s* – *h* index or *g* index (output oriented indexes), and those that depict the impact of the papers in that core – *a* index or *m* index (citation impact oriented indexes).[38,40] These two index types complement each other.[43]

Convergent validity of the *h* index

When evaluating researchers, an important issue arises as to whether the results of bibliometric assessment by the *h* index are comparable to the assessment by peers, the so called convergent validity of the *h* index. We demonstrated that the average *h* index of accepted and rejected applicants for biomedical research fellowships differ statistically significantly.[28,44] Van Raan[14] found that the *h* index values are in agreement with peers' opinion in the field of chemistry. Also, the *h* index predicted academic promotion in urology.[45] Similar good correlation was found between the 2008 UK Research Assessment Exercises grade points and *h* index values.[46]

Future directions of *h* index research

Further studies are needed to examine the significance of the *h* index in different fields of application. According to Mingers,[47] some priorities for future related studies are:
• Validity of the *h* index in large and diverse groups of researchers
• Comparability of the *h* index across and within social sciences
• Validation of the *h* index by more sophisticated bibliographic analyses.

Using the *h* index wisely

The following points should always be considered when the *h* index is used for evaluating scientific output.
• Like other bibliometric measures, the *h* index depends on the length of an academic career, and it should be used for comparing researchers of similar age.
• The *h* index values are dependent on subject category and should be used within one discipline.
• Evaluating research performance on the basis of a single measure is not acceptable, and therefore the *h* index should not be viewed as an omnipotent measure. The number of highly cited and non-cited papers should be taken into account. In addition to bibliometric indicators, evaluations should provide a measure of concentration such as the Gini coefficient or the Herfindahl index, to assess the distribution of citations.[48]
• Bibliometric indicators should be used to support peer review.

Conclusion

The *h* index can act as an alternative to the journal impact factor, overcoming some of the latter's disadvantages, particularly its short citation time window. It can be used by science editors to compare research performance of individuals and institutions. Simplicity and promptness of the index make it particularly attractive, provided that limitations are kept in mind.

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Science editing for medical journals: two perspectives

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Abstract We examine several current issues of relevance to science editing for medical journals. We do so from the perspective of a former journal editor and from that of a current user, a physician responsible for training students to read critically. As Canadians, we bring a North American perspective to the discussion. Within this context, this paper addresses three topics that are likely to be viewed differently from our respective backgrounds. They are open access, peer review, and the role of publications in the context of knowledge transfer and the implementation of research findings. We believe these elements are interwoven and that the first two determine how well findings are implemented. This is equally true for clinicians as it is for researchers, and these relationships also appear to apply internationally.

Keywords Open access; peer review; knowledge transfer; clinical applications

Charles Pless, clinician teacher, writes:

My view is that of a typical clinical consumer of the medical literature. I work as a primary care physician at a university-affiliated clinic and in an emergency department. As well, I regularly supervise medical students and residents, and this involves journal clubs and case discussions. Our students have some training in epidemiology and biostatistics during their preclinical years, and during their residency they use computer-based modules to enable them to critically appraise medical articles. But it is the rare student who has a genuine interest in critiquing what appears in medical journals.

Part of the reason for this lack of interest relates to the fact that most of my own and my students' use of the literature is patient-driven. A patient has a particular problem and we search for an answer. Rarely will students search print journals; instead they head to the computer. The first destination is often the online textbook "UptoDate".[1] This is popular because it is easy to use, reliable, and has a solid reputation. For more in-depth research a Medline search may be conducted. Cochrane reviews are also popular, as are collections of guidelines.

What most of these have in common is that they are secondary sources; someone else has done the work of digesting the primary articles and judging their validity. They have synthesized a bottom-line answer to the basic question: "what should I do with this patient?" Where this opinion came from (and how) is rarely of interest to the busy medical student and future busy physician. That said, I assume authors of texts like UptoDate rely heavily on papers in well reviewed, highly reputable journals.

Occasionally, students are asked to choose a paper to present at a journal club or for a research project and will then have to evaluate it critically. I usually encourage students to choose from among well-known peer-reviewed frontline journals, explaining that a researcher with a good study will generally prefer to publish in the "best" journal. But more and more the lines between "good" and "bad" journals are blurred. Much questionable research is published in supposedly reputable journals, and occasionally we find good research appearing in apparently inferior publications. This leads me to question the importance of peer review and whether open access provides results comparable or superior to what appears in print journals.

Open access

On this topic I have mixed views. Students are among the intended beneficiaries of this publishing innovation that provides easy and free access to medical research. But in fact most medical students have ready access to journals online

through the university's library. Few read print journals, let alone subscribe to them. Most students would not know (or care) whether a particular article comes from an open access journal or a conventional publication. So, from the viewpoint of students, residents, or practitioners, we need to wonder whether open access really matters. As noted above, the provenance of a medical article is no longer a clear, indisputable indication of its scientific validity. With the ease of access to an incredible amount of information via the internet, a student has little reason to prefer a high reputation print journal over any other.

Admittedly, some open access journals that practise "secondary review" are useful from a teaching point of view in that they force the reader to be critical: students and other readers cannot count on the fact that the article appears in a reputable peer-reviewed journal as a supposed guarantee of a certain level of quality. Nor can we assume that either system protects against fraud or other deceptive publication practices. It is well known that this occurs in peer-reviewed journals as well as in open access journals. However, many are convinced that open access fosters knowledge transfer because a financial barrier is removed.

Peer review

My own perspective, which I try to transmit to students, is that the peer review system must be questioned, given the large number of papers we read in journal clubs that appear to be seriously flawed. That said, although I am frequently disappointed with the quality of research I find in many clinical journals, I remain attached to certain journals and am inclined to "trust'" them over others. A good medical journal, like a good publisher or recording label, offers a certain assurance of quality and a comforting sense of familiarity.

Peer review, however flawed, is useful and offers some protection against outright fraud and statistical sleight of hand. Like most practicing physicians, I do not have the skill or inclination to understand and check all the details of the analyses presented in an article. It is therefore reassuring to think that this has been done – and done well – by someone else. Peer reviewers and editors also serve to improve to quality of written communication. Even the best writers benefit from careful editing, and the community of medical writers is not always blessed with the best writers.

In an ideal world, all doctors would have the skill and time to critically appraise the literature and form their own opinions about the quality of the research. In practical terms, however, this may only be possible for specialists or researchers in some narrow domains. But for the generalist it is clearly impossible. When Hippocrates wrote that the art (of medicine) is long but life is short, he didn't even have the internet to contend with!

Knowledge transfer and implementation

For my students, most of whom will become clinicians not researchers, what matters most is whether a paper helps them to practise better medicine. They are increasingly aware of the revelations about the ways in which some pharmaceutical companies try to influence prescribing habits by distorting the publication process. They count on journals (reviewers and editors) to prevent being led in the wrong directions, to the detriment of their patients.

It is important that students and practitioners cultivate a healthy skepticism about conclusions in the literature without falling into a nihilistic agnosticism: it is not the case that because drug companies overly influence some researchers, all research is therefore suspect. Some is good and useful. As practitioners, we must act, not just reflect and criticize. These actions should be based on our best evaluation of the available evidence. We are assisted by rigorous peer review, good editing, and high quality journals, whether they be traditional or open access. Together these elements, alongside our appreciation of the needs of the individual patient, influence what we choose to implement. This is medicine and it is far from an exact science.

Barry Pless, researcher and editor, writes:

As a former editor of a BMJ Specialty Journal, I have a different perspective on many of the issues described above. Having spent nearly 30 years mostly doing research also shapes my views. In effect, our differing viewpoints typify the town-gown debate, or an academic vs a real-world viewpoint. And because much of my research involves injury prevention, it is policy makers and those in public health, not clinicians, who comprise the audience I try hardest to reach.

Open access

This topic has been debated for well over a decade. At the start, it seemed that the proponents of open access were on the side of the angels and that there would not be much serious disagreement about the moral justification for the movement. Since then, however, the open access model has come under closer scrutiny,[2,3] and some have argued that both the conventional model (where readers or libraries pay) and the open access model (where authors pay) are simply different approaches to making a profit for someone beside the researcher.

If this view is true, it may be foolish to view all journals in either category as equivalent; they may actually overlap. Some traditional journals have generous policies that place all material in the public domain at no cost soon after print issues appear. Many make all material freely available immediately to readers in a designated list of low income countries. Similarly, some open access journals waive processing charges for authors from low income countries and for others who make a convincing request for exemption.

To add to the not-black-or-white argument, some years ago I decided that the survival of my journal required that we impose page charges, so even traditional journals may charge authors. By the same token, my experience on the editorial board of one open access journal made me realize how profit-oriented some such journals are. The cost of a print copy was high, and the author charge extremely high. Nor was it clear how readily, if at all, exemptions might be granted. Open access policies were developed with

those with grant funding in mind, typically biomedical researchers. This means that many clinical researchers and others (retirees, for example) without funding cannot publish in most open access journals. It also means that those with personal funds or those with government funding may more easily find a home for their work, even when the science does not merit publication. It seems reasonable to assume that peer review for some open access journals is influenced by the payment involved.

Peer review

The last statement leads directly to the much-debated issue of peer review.[4,5] The criticisms have been well documented and are familiar to readers of *ESE*. Richard Smith, who, during his 25-year tenure as editor of the *BMJ* did more to examine the peer review process objectively in the hope of improving it, has emerged as the most severe critic.[6,7] His strongest single objection is that many journals have been manipulated by the pharmaceutical industry. More generally, he sees peer review as seriously flawed. Smith writes: "We … know that [peer review] is slow, expensive, largely a lottery, poor at detecting error, ineffective at diagnosing fraud, biased, and prone to abuse. Sadly we also know … that most of what appears in peer reviewed journals is scientifically weak." This statement is supported by a large body of mostly critical research.

Clearly, this supports Charles Pless's position, but I think both he and Smith go far too far. I also think their concerns apply much more to clinical and general journals than to public health or specialty journals. There is no substitute for peer review as an essential tool in the triage process. Most good journals receive many more papers than they can possibly publish; without reviewers, it would be entirely up to the editor to decide what to accept. And, although Charles Pless asserts that "the peer review system must be questioned given the large number of papers we read … that are seriously flawed", this criticism may apply more to "clinical" journals than to those in the public health field, perhaps because more is at stake financially. Few authors of papers in public health receive support from "industry" or advertisers. So, before we dismiss peer review entirely, it seems wise to ask whether having editors (with limited knowledge and expertise) make choices alone would result in fewer flawed papers. I think not.

I do, however, concede that as much as authors need journals, editors need papers to print! Accordingly, especially in journals intended to make a profit for their publisher, there is pressure to accept some imperfect papers, and in any event, few papers are scientifically impeccable. Astute, well-trained readers may be able to identify their shortcomings, take these into account, and decide if there is merit in what remains.

Finally, as a former editor of an international journal, I became convinced that North American reviewers tend to be tougher than those in Europe. If this is true, it may help explain why, in general, European journals are less highly regarded than those originating in Canada or the United States. Journal rankings show that readership and citations are considerably higher in journals that are rigorously reviewed. In a recent study,[8] Filon and I set out to "determine whether author, country, journal, or topic were associated with the number of times an epidemiological publication is cited". We compared a clinical topic, cardiology, with a public health topic, injury prevention, and concluded that "Journal and country appear to be the factors most strongly associated with frequency of citation. In particular, highly-cited articles are predominantly published in high-impact, high-circulation journals." We also found that "topic" is a determinant of citations for the cardiology papers but not for those addressing injury prevention.

To further support my conclusion about European-North American differences I consulted the Australian Research Council's Excellence in Research for Australia (ERA) initiative.[9] The criteria ERA uses are described as reliable, internationally recognized, comparable across disciplines, able to identify excellence, relevant to the research component of the discipline, repeatable, verifiable, time-bound, and having a behavioral impact. This is a tall order, but much work has gone into this effort and the results seem difficult to challenge.

Using ERA criteria, some interesting findings emerge. For example, in the category Medical and Health Sciences, only one European journal is listed, and it receives a C rating. In the public health domain, none receive a ranking above a B. In contrast, five American clinical journals and eight public health journals received an A* or A ranking. Admittedly, selecting journals by words in their title (I selected journals with "European" or "American") is debatable, and in any case these findings cannot prove that European reviewers are scientifically less rigorous. Moreover, even if North American peer review is truly tougher than European it may simply reflect the larger pool of reviewers the editors have to choose from – although, by the same token, the pool of papers being submitted is also larger.

Possibly more convincing evidence is found when the United Kingdom is compared with other countries in Europe. Investigating a possible relationship between editorial leadership and journal quality, Matarese compared 76 Medline indexed research journals from Italy and 76 from the UK and measured the quality of papers by using several bibliometric indexes.[10] Editorial leadership was evaluated through the information that journals required authors to supply. The main findings were that, compared to UK journals, Italian journals published fewer papers, less often had online archives, and had lower median impact factors and SCImago journal ranks. With respect to editorial leadership, Italian journals "less frequently required manuscripts to specify competing interests, authors' contributions, funding, informed consent, or ethics review. No Italian journal adhered to COPE, CONSORT, or QUOROM statements, nor required clinical trial registration" whereas these elements were noted in between 15% and 43% of UK journals.

To conclude, I am convinced that peer review, even if it is only a marker for other indices of quality, is associated with more credible publications – which, in turn, are those whose papers are most likely to be adopted clinically.

Knowledge transfer and implementation

Although I am a researcher I have often stated that in many fields, especially in public health, it is not more research that is needed but more attention to ensuring that what is known is fully applied. The implementation of research findings is different in the clinical sphere than in the public health domain. For authors of clinical research, the goal may be to persuade clinicians to switch from drug A to drug B or to use a new test to detect disease Y. Setting aside the often nefarious interventions of industry, this should be a straightforward process. But for authors promoting a public health strategy to prevent injuries, for example, the target is often a policy maker or politician. In this case, even if the evidence provided is compelling, it is less certain that the desired action will follow.

All that is certain in both situations – clinical and public health – is that the paper in question must be understandable. Clear writing is the first step in the process of knowledge transfer: communicating what the authors did and what they found, and this is the greatest challenge no matter where a paper is being written. Editors need to find practical ways to help authors, but authors need to work harder to write clearly.

A related problem is how to help consumers of research knowledge decide what papers provide results worth implementing, especially in the clinical context. As Charles Pless has noted, a starting point is identifying the "better" (more reliable) papers. The impact factor plays a large role, but what is often not fully appreciated is that it relates to journals, not individual papers, and it is individual papers that matter to students and practitioners. For articles, many metrics are available – for example, the number of times each is accessed and downloaded. As well, the importance of a paper (admittedly more for researchers than for practitioners) can be measured by counting citations using Scopus and ISI Web of Science.

Because we write from Quebec, we are compelled to dip into the murky waters of language. Editors agonize over what to do with a paper that appears scientifically sound but which has been written badly because the authors were unable to write in their first language. Ideally, journals would provide editorial assistance to such authors, and occasionally reviewers will do so. But, in general, this is too costly to be routinely provided. Ironically, the students Charles Pless refers to are educated in French, but the reality for them, as for many Europeans, is that most journals are in English. Hence, what influences them is not the language but how well and in what manner the material is delivered. And herein lies the problem. As one publication stated: "Clinical medical journals have not been effective in meeting the information needs of practitioners and bridging the gap between clinical research and practice. The slow adoption of results of clinical research is at least partly due to the failure of clinical journals to disseminate information in a way that would motivate practitioners to change practice…. Strategies that may be useful include publication of pre-appraised evidence summaries and 'clinical bottom-lines' and giving (more) importance to systematic reviews."[11]

Conclusion

Open access, peer review, and knowledge transfer are strongly interwoven. In part, the first two may determine how well findings are implemented. This is equally likely for clinicians as it is for researchers, and these relationships also appear to hold internationally.

Competing interests None declared.

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Editing around the World

Science editing in the developing world: a personal journey

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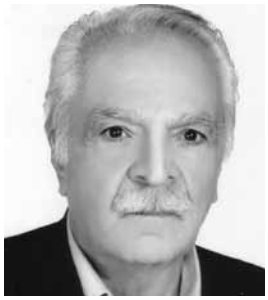

As a science editor, I started my career in medical journalism 40 years ago, when I joined Shiraz University after specialization in radiology in Germany. I have been the founder or principal editor of three English language Iranian medical journals, namely *Iranian Journal of Medical Sciences* (formerly *Pahlavi Medical Journal*), *Archives of Iranian Medicine*, and *Iranian Journal of Radiology*, all of which are now indexed by one or more of the leading online databases. I chose to publish in the current *lingua franca*, trying to prove that language is, in fact, a surmountable hurdle.[1] Other hurdles were poor infrastructure and inadequate funding to drive the rusted wheels of scientific research and, as a corollary, meager output.

At the early stages, it was imperative to stimulate potential authors to write, to propagate this attitude to others, and, at the same time, to maintain a sufficient number of expert reviewers who would be able to evaluate submissions and function as partners, helping to promote the quality of publications.

With limited assistance, to maintain a set of publishing standards, I had to coordinate communication between authors and reviewers, experts in various fields of medical sciences. Before the digital era, it often required long hours of plunging into Index Medicus in hard copy, the only available source of reference in this part of the world.

The main impetus for my interest in medical science editing stemmed from my undergraduate years as well as specialty training in Europe. While reading textbooks I used to pay attention to authors' names in the reference lists at the end of chapters. This stood at variance with what I had learned about the history of Iran in my high-school years in relation to the abundance of scholars and the erudition of the country. It dawned on me how the flow of science had reversed over the past centuries in the Middle East and that the "*lux*" was no more "*ex oriente*".

The major source of discouragement for our activity stemmed, unfortunately, from our own faculty members, who were constantly comparing our journal to the high-ranking world journals and questioning the value of any efforts put into the indigenous product. They considered that all the endeavours we made were futile efforts, and that trying to publish materials from this part of the world was worthless and not of the quality of those published by westerners. They claimed that little could be added to what the developed world published in its journals.

My main efforts were directed at publishing original articles and case reports that were deemed to incorporate some addition to the world's knowledge. Though review articles would come to be important, we did not have access to experts in writing such articles and did not publish reviews. Instead, we emphasized original articles examining disease conditions prevalent in the region.[2]

There was also an incentive to run a journal as an element of patriotism, similar to the efforts made by nearly all countries to have their national flags raised in the international arenaof sports competition.

My message was that promoting scientific research and writing was the only way out of the existing situation. However, far from mainstream research, I had to focus primarily on the description and analysis of endemic diseases which would be attractive to western readers and to the leading indexing organizations. Fortunately, I have been witnessing a steady growth in scientific publications over the past decades, which is certainly encouraging, if not ideal.

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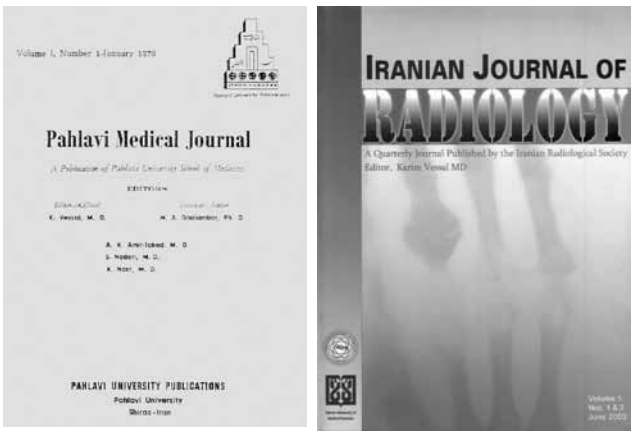

Front pages of the inaugural issues of *Pahlavi Medical Journal* and *Iranian Journal of Radiology*, founded by Karim Vessal

Professional medical writing and ethical issues: a developing country's perspective

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During the past few years, the number of research papers published by Iranian authors has increased dramatically.[1] This could be the result of the increase in the number of institutions, research centers, and universities, encouraging research productivity. Faculty members of such institutions need research papers for academic promotion.[2,3]

To meet the increasing demand for science communication, many scientific journals have been established in Iran. The researchers' demand for promoting themselves academically through publications is a characteristic for all scientific fields, and medicine is not an exception. Currently more than 170 medical journals have been approved by the Iranian Commission for Medical Journals, which is affiliated to the Iranian Ministry of Health and Medical Education.

Although this research productivity in Iran is beneficial for the development and international recognition at individual and country levels, the quality of articles produced does not always meet the international standards, for various reasons.[4] Moreover, with this ever increasing demand for publication, ethical misconduct such as plagiarism, data fabrication, and falsification might emerge.

Collective efforts, on behalf of students, researchers, and journals, are needed to overcome the problems that are faced by researchers and also journals in publishing high quality articles worthy of international recognition.[5] One of these is the English language barrier, which can be frustrating. Some researchers are not proficient in academic English and are tempted to plagiarize. To overcome the language barrier and to prevent plagiarism and other ethical violations, two basic approaches seem necessary.

Firstly, academic training is the backbone of efforts. Researchers, editors, and reviewers need systematic training on specific topics. Stepwise workshops, along with an academic Master of Science course on medical journalism, have been running successfully in Shiraz University of Medical Sciences over the past three years. Such courses and systematic education may change the face of medical publishing in Iran during the next few years.

To tackle the short term obstacle of publishing research by Iranian medical researchers in a standard format, a faster approach seems necessary. Medical writing has been recognized as a profession for some years in Europe and North America. European and American associations of medical writers, EMWA and AMWA, were established by professional medical writers to regulate such activities. Medical writers are able to support researchers and to improve the performance of their scientific publications.

In a developing country like Iran, this profession has not yet been justified. Although some freelance writers help medical researchers with their academic tasks, the efforts are mainly based on a trial and error approach and no unified guidelines or standards for their professional work are in place. Many of the currently freelance medical writers have had diverse editing experiences and are now following differing editing styles.

We believe that Iran's current potential in research productivity requires regulation of medical writing activities and keeping up with the international guidelines for medical journalism. It is crucial to encourage all those involved in medical publishing to adhere to ethical guidelines and guide researchers at all stages of their research accordingly. Freelance writers should be aware that they may not fulfill the standard criteria of authorship, and that putting their names in the byline of articles when they have merely provided professional support can be unethical. They should mediate and facilitate better understanding of research by efficient editing and following standard guidelines. They must propagate publication ethics, and their work should reflect such an idea.

Researchers can find it confusing and time consuming to organize their articles accurately in terms of content and language, or they may not be able to find suitable journals to publish in. Their articles may be rejected regardless of their creative content. Therefore, medical writing institutions can provide valuable advice to help researchers enhance the quality of their articles.[6] This can be a stepping stone in creating professional medical writing guided by ethical standards in the country. It is hoped that with the active participation and contribution of all institutions, researchers, editors, and related organizations, high ethical standards, vital for the whole scientific enterprise, will be observed in the near future.

Competing interests BA works as a freelance medical writer in his free time.

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Reports of Meetings

The Italian health institute takes part in the Science Picnic

Warsaw, Poland, 28 May 2011

The Science Picnic held in Warsaw is considered the largest European outdoor event dedicated to science (http://www.pikniknaukowy.pl/2011/en/). Its aim is to promote and disseminate science culture and technological innovation among the general public, particularly among young people.

Organized by the Polish Radio and the Copernicus Science Centre, Science Picnic has been held since 1997 in one of Warsaw's parks. Research centres, educational institutions, museums, science foundations, and other organizations from Poland and many other European countries take this opportunity to present themselves and their achievements to families and visitors. This year about 100,000 people visited the many stands and participated in the hands-on activities (interactivity was required by the organisers), and in educational and artistic shows, and fascinating experiments, tests, and games.

In 2005 the European Commission considered the Science Picnic to be one of the 10 best projects in the field of "Science in Society", and this led to a renewed enthusiasm for popular science exhibitions all over Europe. Each year the Copernicus Science Centre surveys participants' opinions of the event and also their perception of the role of science.

The Science Picnic is devoted to a different subject each year, lately: The world in 10 years' time; Mathematics and us; Learn the language of science; Science among the stars; The great microworld. This year's theme was particularly attractive: Freedom. Freedom in science means also freedom of knowledge, freedom of dissemination, and free access to health information, to research results, to prevention, and to cures.

These are some of the core missions of the Italian National Institute of Health (Istituto Superiore di Sanità, ISS), which was invited to participate by the Italian Cultural Institute and the Italian Embassy in Warsaw. The Italian stand was organized through close collaboration among these three Italian institutes. In choosing the issues to present, the ISS prioritised the promotion of public health and of the open access models in science publishing. Topics related to prevention of cardiovascular diseases through adopting a healthy Mediterranean diet and reduced salt consumption; appropriate use of antibiotics to prevent antibiotic resistance; preventive vaccination when travelling to an area with malaria; and collaboration between health institutions at global level through the NECOBELAC project (Network of Collaboration Between Europe & Latin American-Caribbean countries, http://www.necobelac.eu/en/index.php).[1]

Hands-on at Warsaw's Science Picnic

At the Italian stand the messages were conveyed to the general public through posters, bookmarks, and leaflets, with the aid of practical demonstrations and fun activities. The presence of a scientific clown was appreciated by the youngest visitors. It was not easy to translate into simple words concepts that are usually directed to a highly specialized community – not to mention the difficulties encountered in translating all the material into Polish and in addressing the visitors in the local language.

The 237 stands scattered over the 40,000 square metres of the park were under the honorary patronage of the European Commission, which, under a huge attractive tent, distributed thousands of miniature copies of the Constitution of the Republic of Poland and performed a number of amusing experiments.

The success of the whole event and of the Italian participation demonstrated that science can be easy for everyone to enjoy and that themes usually considered arduous could be suitable for all visitors. The European Union itself suggests that the opinion of the general public should be taken into account when making decisions about science and technology.[2]

The open access (OA) publication model is usually addressed to the community of researchers, but a new category of OA beneficiaries, outside the core research community, including students, educators, health operators and patients, is now emerging and starting to use scientific literature.[3] Their need for free access to health information and for easily conveyed messages can be partly fulfilled through popular events like science picnics, fairs, educational programmes, museum exhibitions, and other cultural or scientific initiatives devoted specifically to families and children. It is widely accepted that an interest in science should be cultivated at a very young age. Web 2.0 applications and the rapid advance in communication technologies are facilitating the flow of health knowledge and the cooperation in the creation of editorial contents, and it is within this framework that the NECOBELAC project was promoted at the Science Picnic, highlighting

the importance of creating a network of collaboration and a fruitful exchange of training experiences between institutes and countries at a global level.

The format of a Science Picnic works well and could be used in other countries to promote scientific communication to the general public. It is certainly a very pleasant experience for everyone involved!

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How to review and get reviewed

EASE workshop, Barcelona, Spain, 20 June 2011

This EASE workshop addressed a key issue at a time of increased competition among academics wanting to publish their research in leading journals and journals wanting to publish the best articles.

Peer review has, in recent years and in all areas and disciplines, become a field of experimentation and discussion. Authors, editors, institutions, and governments are particularly interested in improving benchmarking processes for researchers, publications, and projects. Yet few seminars and workshops evaluate the peer review process itself and encourage reflection and discussion regarding peer review and scientific practices and ethics.

A short introduction by Arjan Polderman on the role of editors in peer review was followed by Reme Melero's demonstration of the peer review game, a kind of snakes-and-ladders designed for young scientists, who assume a range of roles and experience the dilemmas faced by authors, editors, and reviewers. Reme Melero and Ana Marušić then presented "The peer review process", which concluded with a practical session led by Ana, in which groups had to make decisions regarding ethical dilemmas faced by authors and journal editors. Participants could see for themselves how the limits between what is scientifically considered ethical and unacceptable are put to the test. This practical focus made the workshop particularly enjoyable.

A range of scientific and ethical parameters contribute to the complexity of the review process. Reviewing is largely an altruistic task which overburdened reviewers have to fit into a busy agenda. Although reviewers are often perceived as gatekeepers, their contributions enhance scientific output and academic rigour. The workshop also highlighted the gap between review processes in the experimental ("pure") sciences and the social sciences and humanities; research results in the latter have interpretative and even critical parameters that require specific benchmarking tools.

Peer review is crucial for both authors and publications, since its prestige and continuity depend on the availability of experts willing to review research articles. Reme Melero commented that reviewers need to be prepared to tackle ethical issues, pointing to circumstances in which a reviewer should contact the editor or even decline to review an article. Also discussed was how to select the best referees, whether from among young scholars up-to-date on research or experienced researchers with a historical perspective.

Both Reme Melero and Ana Marušić pointed to review as one of the most fundamental aspects of journal publishing. However, the final word and ultimate responsibility is not with the reviewers but with the editor and editorial board. Reviewers effectively act as scientific consultants to the editor, who, as the person who best knows the focus, aims, and readership of the journal, makes the final decision on whether to publish.

Participants in the workshop included members of EASE, University of Barcelona librarianship and documentation students, lecturers, researchers, translators/editors, and editors of Catalan journals, who offered interesting contributions on practical issues faced in their daily tasks. The workshop covered basic concepts and instruments for reviewing and so was particularly useful for editors and publishers, especially in regard to ethical considerations. Less time was devoted to authors and how they can ensure they get to the review stage; nonetheless, a thorough understanding of editorial decision-making mechanisms is useful for developing article publication strategies.

Finally, how scientific journals are evaluated is a topic that could be addressed in a future EASE workshop.

Translated by Ailish MJ Maher.

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EASE-Forum Digest: March to June 2011

You can join the forum by sending the one-line message "subscribe ease-forum" (without the quotation marks) to majordomo@helsinki.fi. Be sure to send messages in plain text format.

Inconsistencies between authors' instructions and printed articles

Preparing manuscripts is becoming ever more time consuming as journals make increasing demands in their instructions to authors in an attempt to decrease their in-house workload. Tom Lang and Rhana Pike intimated that journals are now essentially "outsourcing" copyediting to authors.

Too many reference list styles?

Karen Shashok asked if authors should follow the instructions to authors or the printed article where there are inconsistencies between a journal's instructions and its printed articles. Persuading authors to change, for example, a reference list to name the first six authors followed by et al as required by the instructions, could be difficult when articles that list only the first three authors appear in the journal. The task is pointless, too, because the number of authors named does not affect the retrievability of the referenced paper. However, some journals warn that they will reject a manuscript without review if it does not comply with their instructions. These journals in particular should ensure consistency between their instructions and printed articles.

Respondents favoured following the journal instructions. Angela Turner pointed out that instructions on the web can be updated quickly. Consequently even within a single issue of her journal *Animal Behaviour* some published articles would be in the old style and some in the new style. Another reason for discrepancy could be that external copy editors who were not used regularly overlooked minor details like the number of authors before et al. She did, however, think it unfair to be strict about following guidelines on submission and suggested that when requesting revision journals could send recently updated instructions to the authors. This idea appealed to Tom because final formatting need not be done until final acceptance, and acceptance could be made contingent on good formatting, which would save time and probably result in better formatting, as poorly formatted manuscripts could still be rejected.

Angela felt that, in any event, authors should be made aware that reference management software should be used only with reference to the journal's instructions. Karen, however, noted the plight of authors in developing countries, who may have poor access to the latest updates to reference management software, so delays between the change in a journal's rules, the availability of a new filter for the reference management software, and the time when authors could download the updates might be considerable.

Sylwia Ufnalska mentioned that in the EASE guidelines for authors and translators she had prepared (http://www.ease.org.uk/pdfguidelines/EASE_Guidelines-June2011c.pdf) the list of references was combined with suggestions for further reading. For this reason the list could not be formatted in Vancouver style (http://www.nlm.nih.gov/bsd/uniform_requirements.html), which is predominant in biomedical journals and favoured by the ICMJE guidelines. (Adjustments to the Vancouver style are common, exacerbating variations between journals.) Consequently, she used the name-year system and alphabetical order, which she felt was both reader-friendly and author-friendly (as no special software is needed to make any changes). She suggested that this sensible system could be adopted by non-medical journals.

The call for a one-style system for references made by Marge Berer prompted Maeve O'Connor to recollect discussion of this topic at a workshop held by ELSE (EASE's predecessor) in 1978. The heated discussions between representatives from the earth sciences, life sciences, chemistry, biochemistry, physics, and engineering made it clear that they could never agree on a single style – and the social sciences and humanities were not even amongst the crowd.

Jim Hartley (professor of psychology) also lamented the impossibility of reaching agreement on one style. He had identified four major groupings, with variations within each: the APA/Harvard style, the MLA style, the Vancouver style, and the IEEE style. He had also seen that the 2007 Endnote computer-based system for referencing included "more than 2,300 predefined bibliographic styles for leading journals". He formatted his articles in the two styles common in psychology – the APA and the MLA styles – to avoid having to look up authors' names again if he needed to resubmit to another journal.

Rather than endless attempts to agree a single style, Lorna O'Brien considered it made more sense to use technology to resolve the problems. Her account of production technology questions what all the fuss is about. She said that in modern journal production, input references (author's file) are converted to structured xml and the output (proof) can then be whatever is required for a particular journal. The structured xml is exactly the same regardless of the input or output style. This means that authors can prepare their references in a generic style that could be the same for every paper they produce, and journals will output in their own style from the xml. All authors' names should be given in the original submission and therefore in the xml, and the journal could then reduce the number they use as required.

Bold and italics in reference lists

Another part of the reference discussion focused on the bold and italic type used in some reference lists. Karen Shashok wondered why some journals embellish the Vancouver style with italics for journal titles and boldface for the volume number. The explanation offered by Andrew

Davis was that each journal or "stable" of journals wanted to create a distinct market image. This justification was greeted with scepticism by Norman Grossblatt as these styles had been around for a long time. More likely, individuals in editorial offices had simply thought it looked better, and once a format is chosen it is difficult to change.

David FitzSimons contended that the use of boldface and italics had value. Bold makes the volume number clear, and italics distinguish a series title. Given the ease of marking typefaces, why shouldn't references be enriched with typographical aids for the reader? Liz Wager had a different theory for the origin of such embellishments: putting references into house style had forced copyeditors in the old days to check that all the elements were in place; automatic electronic formatting has now made the task obsolete. Also, where journals use CrossRef/dois, errors in references will be picked up as the links do not work if details of the references are incorrect. Consequently Liz believed that journals' insistence on their own style was obsolete too.

A word of caution came from Mary Ellen Kerans. She warned that authors still needed to manually check references. Authors with multiple or compound surnames in particular are at the mercy of the software. Marge added that the use of different bibliographic software caused problems. She has found that her copyediting of references is often "uncorrected" by the author's automated software in the manuscripts that authors return to her. Either she has to ask the authors to remove the references from their software so as to keep them corrected or she has to copyedit them again.

Increasing abstract length

Abstracts were another example of a major second area of discrepancy given by Karen. Here the discussion veered to abstract length. Mary Ellen reported that PubMed no longer truncates abstracts at 250 words. Liz posted the URL which states that the limit on Medline abstracts is 10,000 characters: http://www.nlm.nih.gov/bsd/mms/medlineelements.html#ab.

Jim Hartley gave journals published by the American Psychological Association (APA) as an example of journals increasing the lengths of their abstracts. The *APA Handbook*'s 5th edition (2001) stated that abstracts should not exceed 120 words, whereas the 6th edition (2010) stated that word limits vary from journal to journal (in the APA stable) and typically range from 150 to 250 words.

Use of abstracts to assess research validity?

Tom Lang reflected that journals seem to forget that the purpose of an abstract is only to help readers decide whether to read the full article. Nowadays many journals and even the CONSORT group seemed to want the abstract to help readers assess the validity of the research, which is an entirely different purpose. Tom contended that, rather than subverting the established purpose of the abstract, a new form with a new name and requirements should be invented if indeed there was a need for a communication device that would allow readers to assess the validity of the research without reading the full article. Liz Wager agreed in theory but pointed out that it is known that many people read only the abstract, and in some parts of the world only the abstract is available to doctors. Even in the developed world, doctors working outside academic centres did not have access to the full text for many papers and therefore relied on abstracts. In her view, until open access to full text is available to all, or doctors can be persuaded to read the full text, abstracts should be as informative as possible. While the example Tom had given of a journal requiring inclusion of institution review board approval and the like in the abstract was preposterous and such things were not essential for judging the validity of a study, requesting CONSORT items was, Liz thought, more reasonable.

Angela Turner mentioned that her journal's publishers, Elsevier, were introducing a very short summary of the paper (about 3-5 bullet points, each about 20 words long) called "Highlights" to be included in tables of contents, rather than with the paper itself. She saw the advantages but wondered whether it would result in people citing papers on the basis of these mini-abstracts, without reading the full abstract – let alone the full paper!

Conclusion

Karen Shashok set out her conclusion to this discussion. Instructions are becoming ridiculously long and detailed and often involve a lot of copyediting, technical editing, and layout work (especially for figures and tables) that many authors may be less than ideally equipped to comply with. Rhana Pike made a good additional point in asking journals to abandon requirements for publication-quality graphs on submission. This was unnecessary work and expense for the authors, when an unsized pdf should be enough.

The challenges faced by authors increase the frequency of discrepancies between instructions and what actually appears in the published articles. Requiring authors to spend scarce resources complying with detailed instructions, and then not checking or correcting compliance in house, sends the message that compliance is not important.

While consistency and neatness are nice to have so as to avoid distracting readers, the purpose of listing the references is for readers to be able to obtain the papers, for which all they needed was a doi. Therefore, provided that a reference list uses one style consistently, it may be more efficient for journals to allow the author's list to stand, rather than insisting that money, brains, and time are used to convert back and forth between different styles, such as three or six authors' names before et al.

Unsolicited authorship

Should editors worry about co-authors being added to papers without their knowledge, a practice that Will Hughes perceived as rare but increasing? He thought authors probably add highly cited scientists to boost their paper's citations and make them more authoritative. Publishers avoid liability by ensuring that corresponding authors sign a declaration that all authors are aware of the paper and are validly listed as co-authors. In Will's view this did not solve the problem, and he wondered if journals should obtain a

declaration from each author. Arjan Polderman's journal, *Pharmaceutisch Weekblad*, gets all authors to sign such a declaration after the paper is accepted for publication. Angharad Hills reported that the Geographical Society Publishing house uses an online submission system (AllenTrack) that has a facility for notifying all authors when a decision is made, but they did not follow up emails that bounced back. If unsolicited authorship was on the increase, she felt they should become more diligent.

Liz pointed out that COPE has a flowchart (http://www.publicationethics.org/files/u2/04A_Author_Add_Submitted.pdf) that covers the situation where a new author is added *after* the manuscript has been submitted to a journal. In this case the editor should seek an explanation for the addition.

Does anyone understand the ICMJE authorship criteria?

The discussion on unsolicited authorship took a turn to become an analysis of the ICMJE authorship guidelines (http://www.icmje.org/ethical_1author.html). Elisabeth Heseltine's interpretation was that to meet these requirements a new author would have had to have been involved not only in revising that paper but also in the conception and design of the study or analysis and interpretation of it, both of which are unlikely to take place after the manuscript had been submitted to the journal. The guidelines state: "Authorship credit should be based on 1) substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; and 3) final approval of the version to be published. Authors should meet conditions 1, 2, and 3."

Elisabeth thought the guidelines were designed to guard against people qualifying for authorship through merely making suggestions for changes to the draft paper. Liz viewed "interpretation" as giving considerable latitude. For example, an author's involvement in design and conception might not have initially been substantial enough to qualify them for authorship but the author's contribution to revision might be regarded as "interpretation" and be such as to qualify for authorship. She thought it would be helpful if journals' instructions explained authorship criteria.

Mary Ellen read the guidelines as meaning the conception and design criteria were one possible contribution and revising the manuscript was another. How then, wondered Elisabeth, should the statement that "Authors should meet conditions 1, 2, and 3" be interpreted? Mary Ellen admitted to doubts about the "and" in the three-point list but the overall statement included "An author must take responsibility for at least one component of the work, should be able to identify who is responsible for each other component, and should ideally be confident in their co-authors' ability and integrity." She understood this as meaning that all three of those criteria could make a person eligible. Elisabeth thought the sentence indicated that to be an author a person must take responsibility for at least one component of the work, which she considered to be the study, and must also have fulfilled the other two criteria. Mary Ellen understood "work" to include all of the work from conception to proofreading, and no single author would do all of the work but could keep an eye on who was responsible for what.

Marcin Kozak and Andrew Davis firmly believed it was not practical that authors should have to meet all three criteria, which would leave some papers without any authors; one of the three criteria should be sufficient.

Time for refereeing

What is a reasonable time to allow for reviewers to respond to invitations to review? Will Hughes' journal *Construction Management and Economics* sends manuscripts to four reviewers with reminders three and five days after sending the invitation and cancels the request on the seventh day if reviewers do not respond. It allows 14 days for the review. Some reviewers had complained that this was too tight. Marcin thought four weeks was more reasonable as time could be needed to reflect on a paper and reviewers might have a number of papers to review at any given time. He also thought four reviewers were too many for authors to contend with, as reviewers' views can vary, leaving the authors in a predicament as to which opposing suggestion to comply with. Will accepted these points but thought it better for a reviewer to decline an invitation than to keep editors waiting. The journals that Diana Epstein manages in the ophthalmology field allow 21 days for reviewers to return their comments. They send to two reviewers, and to a third if their opinions conflict. Liz Wager thought two or three reviewers were more usual in medicine, and most medical journals expect reviewers to return their reviews in 10-14 days. *Animal Behaviour* allows referees 14 days. They rely on two reviewers and seek a quick third review from the editorial board in cases of conflict. Their main problem was to get reviewers to accept the invitation.

A survey conducted by Elsevier between 2005 and 2008 found that the average time to review was 16 days. Those who agreed to review were agreeing faster, within 3.9 days in 2008 compared with 5.2 in 2005, but the number agreeing was declining by 1% a year.

Jim Hartley advocated an auction system called Peer Choice, which was being tested by the journal *Chemical Physics Letters*. Abstracts of manuscripts are sent to a panel of reviewers with the authors' names withheld. The panellists email the editor to say which manuscripts they would like to review, and the editor allocates to the first bidders. In Jim's experience the system works well.

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This Site I Like

Research misconduct: now, the movie

http://ori.hhs.gov

Integrity of research is the foundation of respect between the academic world and the public. Nonetheless, misconduct in research can occur. The Office of Research Integrity (ORI), part of the US Department of Health and Human Services, has the important role of promoting integrity in research processes, such as the accuracy of research data and research publications and the prevention of research misconduct (fabrication, falsification, and plagiarism).

Its website offers many useful documents, ranging from forensic tools for quick examination of scientific images and plagiarism to procedures for responding to allegations of research misconduct. It also has a quarterly newsletter created to facilitate pursuit of a common interest in handling allegations of misconduct and promoting integrity in research supported by the (US) Public Health Service.

Most misconduct cases handled by ORI (see the "Case Summaries" section of the website) involve data fabrication or falsification. The quality and accuracy of the data is one of the most important elements in ensuring scientific integrity and public confidence in research results and findings. The theory is well known: data must be valid, reliable, and interpreted and reported correctly. But, what could happen in practice? For example, what might happen if the data of celebrated research conducted by your laboratory are suspected of having been falsified? And what if you are the one who had the responsibility of reviewing these data? Or the one who suspected misconduct?

Walking in their shoes

For those who are interested in discovering the consequences of misconduct, but are too bored to read another article on this topic, ORI has developed an entertaining tool called The Lab. The logo shows four young, good-looking people who could well come from an episode of CSI, and the site explains that "The Lab: Avoiding Research Misconduct is a Virtual Experience Interactive Learning Simulation program".

The simulation allows you to choose one of four roles: Kim, a young graduate student who questions the use of her data by another researcher; Hardik, a postdoc researcher who tries to balance the competitiveness in the laboratory with his home life; Aaron, a principal investigator whose overwhelming responsibilities as a professor, researcher, and grant writer lead to his decline as a responsible mentor; and Beth, the university's research integrity officer.

After choosing their role, participants are asked to make ethical decisions: for example, what would you do if you suspect someone of falsifying data? Do you confront him/her directly or do you seek more advice from those you respect? Which are your personal responsibilities and what is your obligation to the lab?

The right thing to do

The story spins off in different directions depending on your decisions. Unlike in real life, you can go back in time, make a different choice, and find out the consequences of each decision. This helps participants understand how much harm or benefit could come from their actions. Furthermore, they can understand that many factors affect every decision: suppose, for example, that you are requested to review an article, but you sign the permission form without actually reading it. Can your opinion of a colleague influence the accuracy you use in verifying his/her data? Can you be influenced by the stress of time pressure in myour decisions? In misconduct cases, the responsibilities within research teams are particularly important.

Distorted results may represent a great risk if they are then used to develop guidelines and to make treatment choices in clinical practice. On the one hand, the lead investigator has responsibility to guide properly the team, establishing adequate data collection procedures, making sure that all members of the team understands their responsibilities, and providing supervision and training in handling data. On the other hand, every member of the research team should follow the established procedures, and ask questions if there are problems with the data.

The Lab simulator also underlines the importance and the role of the research integrity office in handling misconduct cases. When a case of misconduct occurs, advice from colleagues may be useful, but talking with ORI is the best way to obtain all the support needed. ORI does not directly conduct investigations in misconduct cases, but it provides assistance to institutions at all stages of their reviews of allegations (for example, providing legal assistance or advice on best practice).

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My Life as an Editor – Roger Jones

Roger Jones, Emeritus Professor of General Practice in the Department of Primary Care & Public Health Sciences at King's College London, became the editor of the *British Journal of General Practice* early in 2010.

Tell us about your early career

My father was a journalist and my son is a freelance science writer, so there is probably something genetic going on here. I have always enjoyed writing and seeing myself in print. After working in renal medicine and spending five years in general practice I moved into academic primary care. I was head of general practice and primary care at King's College London for 17 years. I edited *Family Practice,* published by Oxford University Press, for 10 years and then did penance by editing the *Oxford Textbook of Primary Medical Care* – two volumes, over 400 contributing authors, never again! I have been editing the *British Journal of General Practice* for the past 18 months.

How did you become a journal editor?

The first time I was simply asked by the previous editor if I would like to take over – those were the days. For the *BJGP* there was a rigorous and transparent recruitment and appointment process. The post of editor was advertised internationally, a formal shortlist was drawn up by a selection group from the Royal College of General Practitioners, and I was interviewed by senior college officers plus the chief executive officer.

What were your early responsibilities, and how soon did you know that this was a life career?

Editing *Family Practice* was a part-time job and the journal was published on a shoestring for many years, with infrastructural support for the editor heavily dependent on having an excellent PA/secretary in the department to handle submissions and responses – and of course this was at a time when submissions arrived on paper, in the post, in triplicate, with a floppy disc attached to them with a rubber band – which meant that brown cardboard boxes containing each issue were always being shunted around our offices. Times have changed.

The biggest "buzz" in those early days was feeling that you were developing an overview of the way in which primary care research was being conducted around the world and that you were in a position to make a difference by getting the best of it into print.

What is the hardest editorial decision you have had to make?

The toughest one was when I was editing the *Oxford Textbook.* We were absolutely at the deadline for chapter completion and I received one very late chapter which had been given the OK by the section editor. I decided to have a look at it and found that it was unpublishably dreadful. It was on a subject I knew little about, but as there was no chance of getting someone to re-write it I locked myself away for 12 hours with textbooks and the internet and wrote it from scratch – and as far as I know the original author didn't notice. After this I am unimpressed by people who say they can't turn an editorial round in a couple of weeks.

What are the biggest changes you have seen in editing?

Elecronics, clearly – manuscript handling systems, reviewer databases, web publishing, apps, citation databases – all essential nowadays. The ability to run your journal from anywhere in the world is an incredible advance.

Do the changes in the publishing industry fire you up or make you flag?

I'm generally enthused by all this, especially when I talk to younger colleagues, whose predictions on the future of paper publishing in the next couple of decades drive me to think harder about where we want to be in 5 or 10 years' time.

What advice would you offer a young editor?

Get familiar with all aspects of the journal, including the commercial and financial ones – keep asking questions, and pay attention to detail. Until you are sure that you are on top of the systems and that everyone on the journal is doing a great job, keep a very close eye on it. Don't get isolated – create a small group of advisers, virtual if need be; go to conferences and meetings that refresh, inform, and stimulate you.

***BJGP* has just had a makeover. How would you advise editors contemplating such an initiative?**

We wanted to make the *BJGP* more attractive and accessible to readers – academics and service GPs alike – so we embarked on a paper short/web long strategy for publishing original research. We reorganised, colour-coded, and brightened up the internal sections of the journal and decided to have a different cover image every month.

My advice is to take re-design soundings from colleagues and key stakeholders – that is, those most likely to object to change – whilst having a fairly clear idea of what you want yourself (and in this case after discussion with the editorial board and groups of younger GPs).

What do you predict for yourself and your journal five years from now?

I'll be ready to hand it on then and I hope that we will be more widely read and more profitable than we are now. I'd like to ensure much wider global reach, with free or heavily subsidised access for low income countries. I'd like to give our reviewers and authors an excellent service with individual feedback, and I'd like to see the journal participating in research in many areas of academic publication/dissemination.

News Notes

News Notes are taken from the EASE Journal Blog (http://ese-bookshelf.blogspot.com). Please email items for inclusion to John Hilton (hilton.john@gmail.com) or Lionel Browne (lionel.browne@sfep.net), with "News Notes" as the subject.

TinyURLs may be given to save space and aid reading; full URLs (clickable links) can be found on the EASE Journal Blog.

New journals: what's in a name?
Three of the biggest science funders announced in June that they will be launching their own new journal. The Howard Hughes Medical Institute (HHMI), the Max Planck Society, and the Wellcome Trust are supporting a "new, top-tier, open access journal for biomedical and life sciences research" and are investing heavily in the project.

In July, the editor-in-chief of the as-yet unnamed journal was announced as Randy Schekman, an HHMI Investigator at the University of California, Berkeley, USA, and editor of the *Proceedings of the National Academy of Sciences* since 2006. Schekman will spend about half his time on the new journal, and a team of senior editors are expected to give about 20% of their time. All editors will be paid for their time, and there will be no fee to publish in the journal for at least three years, although the funding agencies want to work with a publisher to develop a sustainable open-access model.

The journal was driven by a desire to avoid lengthy peer review ("We're not going to go through endless iterations of nitpicking," said Wellcome's Mark Walport) and to employ active scientists rather than professional editors. In an interview for *ScienceInsider* Schekman explained this move: "We just have a feeling that it's better to rely on active scientists who can appreciate the author's point of view." He also revealed that reviewers will be paid, possibly by annual retainer. The journal will launch in 2012.

Two new, UK-based open-access general biology journals were announced in May and they do have names, although strikingly similar. *Open Biology* is published by Royal Society Publishing (royalsocietypublishing.org) and is now accepting submissions, while *Biology Open* (BiO), from the Company of Biologists (open.biologists.com), launches in autumn 2011. These new titles will compete with the likes of *BMC Biology*, *PLoS Biology,* and *The Open Biology Journal*.

UK peer review inquiry
The inquiry into peer review by the UK parliament's Science and Technology Select Committee heard oral and written contributions from many scientific and medical journal editors as well as researchers, funders, and representatives of learned societies (tinyurl.com/UKPeerReview). The inquiry was prompted by concerns that the peer review process was in crisis due to the burden on time, a lack of incentives for reviewers, failures of reviewers to spot error or misconduct, and a tendency towards conservative judgements. Journal editors were broadly supportive of peer review while acknowledging concerns about variability and lack of evaluation. Researchers also affirmed that, while flawed, peer review remained the best way of ensuring the quality of research. We await the inquiry's findings.

Who's looking after the data?
The *Journal of Experimental Medicine* (jem.rupress.org) has decided to immediately stop publishing non-essential supplementary material. An editorial in the 4 July edition of the journal announced this move, claiming that journals are being used as "data dumps". This decision comes at a time when funding agencies are increasingly asking researchers to make data accessible, and raises questions about the role of journals and the nature of a scientific article. Are the underlying data part of the article? And if so, whose job is it to curate those data?

Apps and APIs
Elsevier has launched a competition to encourage software developers to create new applications that help researchers locate the information they need. The applications can make use of application programming interfaces (APIs) to access the company's SciVerse databases. More details are on the Apps for Science website (www.appsforscience.com). In a similar move, the Public Library of Science (PLoS) has teamed up with Mendeley, a reference manager and "academic social network", to set up a "Binary Battle" (dev.mendeley.com). Developers are invited to use both organisations' APIs to find ways of making science more open.

Journal data mining
A new report commissioned by the Publishing Research Consortium looks at how journals deal with an increasing number of requests for data mining projects. The report (available at www.publishingresearch.net) defines data mining (or "content mining") as "the automated processing of large amounts of digital content for purposes of information retrieval, information extraction, and meta-analysis". It concludes: "Few publishers have a publicly available mining policy; the large majority handle mining requests on a case-by-case basis. Approximately 30% of publisher respondents allow any kind of mining of their content without restrictions, in most cases as part of their Open Access policies. For the other publishers, nearly all require information about the intent and purpose of the mining request."

Gigascience and megajournals
If you are creating biological data faster than you can process them, then how do you publish data in a useful and timely way? That problem

is being tackled by *GigaScience* (www.gigasciencejournal.com), a new journal and database developed by BioMedCentral and BGI, a genomics institute supported by the Chinese state. Datasets submitted to *GigaScience* receive a DOI and are fully open access in advance of any manuscript submission. The manuscript will link to the data via analytical tools and will offer cloud-computing functionality to enable rapid sharing.

This scaling up applies to journals as well as data. At the 3rd Conference on Open Access Scholarly Publishing, to be held in Tallinn, Estonia, on 21–23 September 2011, representatives of most of the major open-access "megajournals" (*PLoS One*, *BMJ Open*, *Open Biology*, *SAGE Open*, *Scientific Reports*) will discuss the ups and downs of large-scale, rapid, open access, scalable publishing, and the merging of journals and databases.

The Power of Open

The Power of Open (thepowerofopen.org) is a collection of stories from individuals and groups who have used Creative Commons content to inspire, inform, or innovate. Available in print or as a PDF, the book is available in English, French, Japanese, and Portuguese, with more languages to follow. Publishers, artists, educators, and many others explain how they use Creative Commons licensing models in successful enterprises.

COPE discusses plagiarism

The Committee on Publication Ethics (COPE) has published a discussion paper on plagiarism and is seeking comments from members and non-members on key questions, such as defining types and levels of plagiarism and what steps journals should take for each type of transgression. The paper, published on the COPE website (www.publicationethics.org/resources), gives an overview of the topic and highlights where existing guidance and flowcharts may not be sufficient.

Article of the Future

Elsevier's "Article of the Future" project has moved to a new phase with the publication of seven new prototypes for re-imagined science papers across seven different disciplines. The project, which started in 2009 with the journal *Cell*, is described as a "never-ending quest to explore better ways to create and deliver the formal published record". You can view and comment on the prototypes at www.articleofthefuture.com.

A reviewer registry?

Would the problems with peer review be helped by making more effort to engage reviewers in the editorial process? Writing in the July 2011 issue of *Learned Publishing* (2011;24:231–223), Fay Ling of the American Thoracic Society suggests that journals could collaborate with software vendors to develop and share online reviewer registries and communities. These would supplement the journal's own databases and would allow potential reviewers to identify the subjects and journals they wish to contribute to.

Conference highlights

If you weren't able to attend the recent conferences of the UK Serials Group in April or the Society for Scholarly Publishing in June, you can watch presentations from both online (river-valley.tv). The "most watched" presentations include Bill Russell (Emerald Group Publishing) discussing the impact of social networks on research workflows (at UKSG) and Nathan Watson (BioRaft) on using software tools to streamline all aspects of research (at SSP).

SfEP proofreading test

The UK Society for Editors and Proofreaders has developed an online proofreading self-test, designed to give prospective proofreaders a taste for the work and feedback on their aptitude. The test includes 20 questions about possible deletions, insertions, substitutions, and queries in a piece of somewhat imperfect writing. Try it yourself at www.sfep.org.uk/pub/train/self_test.

Who checks for conflicts?

A recent investigation by Reuters Health found that one of the authors of a 2010 *British Journal of Dermatology* paper had failed to disclose significant financial interests in the product (DHEA) being investigated. It raised the issue of whether it's up to authors to declare conflicts or whether journals or institutions should enforce disclosure policies. Margaret Winkler, online editor at *JAMA* and past president of the World Association of Medical Editors, felt that it was "impossible to police," but David Rothman of the Center on Medicine as a Profession, a think tank based in New York, urged editors, deans, government agencies, and others to start spot checks for verifying disclosures.

Top 15 mistakes

May's *News Notes* included some tips on how to write a boring research paper. Now we present a checklist on how to do bad clinical research. The study of the most common mistakes made by young researchers was published in the *Journal of Prosthodontic Research* (2011;55:1–6) and reported in the Labcoat Life blog (www.nature.com/scitable/blog/labcoat-life). The Top 15 list, which includes everything from failing to search the literature adequately to failing to implement adequate bias control, may also be useful for young (and old) science editors.

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The Editor's Bookshelf

Please write to annamaria.rossi@iss.it if you wish to send new items or become a member of the EASE journal blog (http://ese-bookshelf.blogspot.com) and see your postings published in the journal.

ECONOMICS

Harnad S. **No-fault peer review charges: the price of selectivity need not be access denied or delayed**. *D-Lib Magazine* 2010;16(7/8).
Funds to pay for open access publishing are short and about 80% of journals are subscription-based. Paying to publish might inflate acceptance rates and lower quality standards. A solution could be that institutions, universities, and funders mandate Green OA self-archiving of final peer-reviewed drafts by their authors. A "no-fault basis" peer review charge is also suggested: the author's institution or funder should pay for each round of refereeing, regardless of outcome (acceptance, revision, or rejection). If the journal fee were not a publication fee but a refereeing fee, the costs per accepted article would be much lower and it would discourage unrealistic submissions that take up the time of journals' referees.
doi:10.1045/july2010-harnad

EDITORIAL PROCESS

Meerpohl JJ, Wolff RF, Antes G, von Elm E. **Are pediatric open access journals promoting good publication practice: an analysis of author instructions.** *BMC Pediatrics* 2011;11:27.
Editorial recommendations such as the Uniform Requirements for Manuscripts issued by the International Committee of Medical Journal Editors were mentioned in the instructions to authors of 66% of paediatric journals reviewed; that is, more commonly than in conventional journals. Further research should confirm these exploratory findings in other medical fields and should clarify what the motivations and barriers are to implementing such policies.
doi:10.1186/1471-2431-11-27

Newton PD. **Quality and peer review of research: an adjudicating role for editors**. *Accountability in Research* 2010;17(3):130–145.
This study describes shortcomings of the peer review process and provides situational, personal, social, and ethical factors influencing reviewers' and editors' behaviour. Editors need to know of potential influences on reviewers and also on themselves. Some data are offered which illustrates the problem and suggests potential solutions. Journals with large editorial boards could consider using a small team to nominate and evaluate reviewers, make decisions, and communicate with the authors. Reviewing might be improved through the education and training of postgraduate students.
doi:10.1080/08989621003791945

Rushby N. **Peer review**. *British Journal of Educational Technology* 2010;41(5):668–671.
This editorial aims to explain some aspects of peer review that may not be familiar to some readers. Although the reviewers' comments help the journal's editor, it is the editor who has the final decision and takes responsibility for what appears in the journal. But the reviewer has the opportunity to review submissions well before they appear in the journal and can identify trends and issues that may come up in the future. One problem is the possibility of bias, which can result from the prestige of the author and their institution. If the reviewer has a conflict of interest, it must either be declared to the editor, or the reviewer should decline the invitation to carry out the review.
doi:10.1111/j.1467-8535.2010.01117.x

Shattell MM, Chinn P, Thomas SP, Cowling R. **Authors' and editors' perspectives on peer review quality in three scholarly nursing journals.** *Journal of Nursing Scholarship* 2010;42(1):58–65.
This study examines the quality of peer review in three scholarly nursing journals from the perspectives of authors and editors. In particular, it examines the extent to which manuscript reviews provided constructive guidance for authors to further develop their work for publication, and for editors to make informed and sound decisions on the disposition of manuscripts.
A majority of authors agreed that peer reviews provided constructive guidance, and a majority of editors agreed that reviews provided adequate rationale.
doi:10.1111/j.1547-5069.2009.01331.x

Van Rooyen S, Delamothe T, Evans SJW. **Effect on peer review of telling reviewers that their signed reviews might be posted on the web: randomised controlled trial.** *BMJ* 2010;341:c5729
Telling peer reviewers that their signed reviews might be available on the *BMJ*'s website had no important effect on review quality. However, it may reduce the number of willing reviewers and increase the amount of time taken to write a review. *BMJ* believes that the ethical arguments in favour of open peer review outweigh any disadvantage.
doi: 10.1136/bmj.c5729

ETHICAL ISSUES

Hagen B. **Tools for the effective management of plagiarism complaints**. *PSP Bulletin* 2010;9(4):8–10.
IEEE, the world's largest professional association dedicated to advancing technological innovation and excellence for the benefit of humanity, has developed a suite of tools that efficiently define, identify, and manage plagiarism

complaints [see http://www.ieee.org/publications_standards/publications/rights/plagiarism_FAQ.html]. The combined use of these three essential tools (policy guidelines, a plagiarism detection system, and an enhanced resolution service) has been extremely effective and has made it possible for the IEEE editorial staff to manage all plagiarism complaints.

Scott-Lichter D. **Publication ethics: prevention, screening, and treatment.** *Learned Publishing* 2011;24:84–85.
The author of this editorial underlines what can be done to address ethical concerns (such as plagiarism, fabrication, and falsification) and at the same time maintain the timely flow of reliable scholarly information. The need to correct ethical breaches after publication can be reduced if potential indicators can be identified before publication. This proactive approach requires education and changing of human behaviour.
doi:10.1087/20110201

INFORMATION RETRIEVAL

Harnad S. **Open access to research: changing researcher behavior through university and funder mandates.** *JEDEM Journal of Democracy and Open Government* 2011;3(1):33–41.
A somewhat conservative perspective on "e-democracy" as public access to scholarly and scientific research is presented. To maximise the usage and impact of research carried out in research institutions, depositing final drafts in open-access institutional repositories immediately upon acceptance for publication will make them freely accessible to all potential users web-wide.

LANGUAGE AND WRITING

Hall PA. **Getting your paper published: an editor's perspective.** *Annals of Saudi Medicine* 2011;31(1):72–76.
A short review based on a personal perspective on the issue of writing scientific papers in the biomedical field. The review is based on the author's own experiences as a reviewer and an editor. By means of 10 simple lessons, the problems and the pitfalls of getting a manuscript published are considered.
doi: 10.4103/0256-4947.75782

PUBLISHING

Hartley J. **Write when you can and submit when you are ready!** *Learned Publishing* 2011;24(1):29–31.
The author rejects the notion that we should write when it is hot (in the summer months) and submit when it is not (in the winter months – when there would be less competition). He expressed this point of view in an earlier article in the same journal (doi:10.1087/20100206), based on data over a four-year period. More supporting data would be needed to sustain this notion, as different results would probably be found with different journals. Differences also depend on journals' editorial policies. So the author's conclusion is: it is better to write when you can, and submit straight away.
doi:10.1087/2011015

Gasparyan AY, Ayvazyan L, Kitas GD. **Biomedical journal editing: elements of success.** *Croatian Medical Journal* 2011;52(3):423-428.
Scholarly journals are increasingly being recognized as educational tools. In view of recent trends in information flow, digitalization, and acceleration of the publishing process - which may increase the rate of errors and mistakes - editors, authors, reviewers and publishers should consider every detail, from submission to publishing, to ensure a high quality of publications. Some elements relevant to success are a qualified editorial team, internationalization of the peer review process, a unique journal title, specific scope of interest, original content of articles, indexing in databases, and wider journal visibility.
doi:10.3325/cmj.2011.52.423

Kennan MA. **Learning to share: mandates and open access.** *Library Management* 2011;32(4/5):302–318.
Why is open access is not practiced by all researchers, all the time, or more encouraged by library managers? Sometimes a new actor such as a mandate or deposit policy is required, to assist library and repository managers and to encourage authors to look beyond their existing frames and embrace open access.
doi: 10.1108/01435121111132301

Kenneway M. **Author attitudes towards open access publishing**. InTech, 27 April 2011.
A survey among a group of InTech's author found that they are generally favourably inclined towards open access, being aware of the benefits of free access to their work after publication. As might be expected, most of the authors have concerns about cost and quality control of open access publications. Publishers should satisfy authors' demands for an in-depth pre-publication peer review system, have a clear policy on peer review, and ensure transparency.
http://www.intechweb.org/public_files/Intech_OA_Apr11.pdf

Miguel S, Chinchilla-Rodriguez Z, de Moya-Anegón F. **Open access and Scopus: a new approach to scientific visibility from the standpoint of access**. *Journal of the American Society for Information Science and Technology* 2011;62(6):1130–1145.
Few studies show the impact of open access (OA) in the visibility of journals which covers all scientific fields and geographical regions. This article presents analyses on the degree of proliferation of OA journals in a data sample of about 1700 active journals indexed in Scopus. The results show that the benefits of OA in terms of impact are to be found on the green road (authors publishing in a traditional journal and then self-archiving their postprints in their institutional repository).
doi:10.1002/asi.21532

RESEARCH EVALUATION

Davis PM. **Open access, readership, citations: a randomized controlled trial of scientific journal publishing.**

FASEB Journal 2011;25(7):2129–2134.
A randomized controlled trial of open access (OA) publishing, involving 36 academic journals in the sciences, social sciences, and humanities examined the effects of free access on article downloads and citations. OA articles received significantly more downloads (almost a doubling) and reached a broader audience than subscription-access articles within the first year after publication, yet they were not cited more frequently within three years. The author concludes that the real benefit of free access to the scientific literature is to those outside the core research communities, who consume, but rarely contribute to, the corpus of literature.
doi: 10.1096/fj.11-183988

Metze K. **Bureaucrats, researchers, editors, and the impact factor – a vicious circle that is detrimental to science.** *Clinics* 2010;65(10):937–940.
The article aims at illustrating the weakness of the impact factor as a measure of science and at showing its negative impact on science. The popularization of impact factor as a rapid and cheap method for evaluation of researchers or research groups has stimulated a dynamic interaction between bureaucrats, researchers, and editors. It has created a vicious circle where the measurement process strongly influences the measured variable. Examples are presented to demonstrate the increasing pressure to manipulate the impact factors, such as excessive self-citations.
doi:10.1590/S1807-59322010001000002

Saadat R, Shabani A. **Investigating the citations received by journals of Directory of Open Access Journals from ISI Web of Science's articles**. *International Journal of Information Science and Management* 2011;9(1):57–74.
Investigating the citations received by DOAJ's journals from the ISI Web of Science's articles in the years 2003–2008, the main question was: are journals in the Directory valid and can they be cited? A total of 2953 journals were divided on the basis of the five ISI divisions of sciences and they were studied and compared accordingly. Findings showed that 11% journals received citations, with an average number of citations per article of 6.45. Researchers cited OA journals in the field of Pure Sciences more than the other four fields, and the citations received by the journals in the two fields of Pure Sciences and Health & Medical Sciences were considerably more than the other three fields.

Sanni SA, Zainab AN. **Evaluating the influence of a medical journal using Google Scholar.** *Learned Publishing* 2011;24(2):145–154.
A medical journal's influence can be calculated by using citations obtained from Google Scholar and other methods even though the journal is not covered by any citation database. 580 articles published in the *Medical Journal of Malaysia* (MJM) between 2004 and 2008 served as sample.
doi: 10.1087/20110210

Turk N. **Do open access biomedical journals benefit smaller countries? The Slovenian experience.** *Health Information and Libraries Journal* 2011;28:143–147.
The article considers whether open access (OA) publishing provides a way to improve the visibility of research outputs from smaller countries. Slovenia's bibliographic database was searched to identify all biomedical journals and those which are OA. None out of 18 Slovenian OA journals has an impact factor. The solution could be to reduce the number of journals and to increase their quality by encouraging scientists to publish their best articles in them.
doi:10.1111/j.1471-1842.2011.00932.x

Wagner AB. **Open access citation advantage: an annotated bibliography**. *Issues in Science and Technology Librarianship* 2010;Winter.
This bibliography lists studies and reviews articles that examine whether open access articles are cited more frequently than toll access articles. Results show a strong OA citation advantage, which means a greater research impact, with a citation impact differential of 25-250% in favour of open access for the majority of studies, and particularly for larger studies; a minority of studies found no effect. Possible explanations for these anomalies include small sample size (one study refers to a statistically insignificant advantage for open access articles), disciplinary citation patterns within disciplines, and failure to allow sufficient time to observe the citation impact difference. The author points out that no study found a citation disadvantage for open access.
http://www.istl.org/10-winter/article2.html

Xia J, Myers RL, Wilhoite SK. **Multiple open access availability and citation impact**. *Journal of Information Science* 2011;37:19–28.
The study examined the correlation between multiple open access availability of journal articles (that is, multiple versions being available in multiple locations) and citation advantage by collecting data on the appearance of open access articles and citations in the 20 top library and information science journals published in 2006 (total number 875). The analysis found a statistically significant correlation between the OA status of the articles and a positive impact on their citation account.
doi: 10.1177/0165551510389358

SCIENCE

Knowledge, networks and nations: global scientific collaboration in the 21st century. *Royal Society, London* 2011.
Reviewing the changing patterns of science and scientific collaboration, this report aims to identify the opportunities and benefits of international collaboration, to consider how they can best be realised, and to initiate a debate on how international scientific collaboration can be harnessed to tackle global problems more effectively.

Habibzadeh F, Yadollahie M. **Evidence-based journalism**. *Croatian Medical Journal* 2011;52(2):212–213.
The principles of evidence-based practice can be used in the field of journalism. An application of one of

the basic approaches used in evidence-based practice, PICO (Population, Intervention, Comparison, and Outcome) can be applied in biomedical journalism, for example to study whether single-blind review is as good as double-blind review in a small scientific community.
doi:10.3325/cmj.2011.52.212

Krikorian G, Kapczynski A, eds. **Access to knowledge in the age of intellectual property**. New York: Zone Books, 2010.
The editors have created the first anthology of the "access to knowledge" or "A2K" movement, mapping this emerging field of activism as a series of historical moments, strategies, and concepts. Intellectual property law has given rise to new debates and struggles over politics, economics, and freedom.

Qiu J. **Chinese Academy of Sciences has big plans for nation's research**. *Nature News* 2011;24 March.
Last February, Bai Chunli became president of the Chinese Academy of Sciences. He is interviewed about science in China and his vision for the institution. He aims at boosting quality, collaboration, and commercialization of research. The Academy's evaluation system of research and science productivity, which is now largely based on the number and quality of papers, will shift towards assessing the quality of innovation, and its actual contribution to society and progress. The Academy will consolidate its collaborations with developed nations but it will also promote cooperation with developing nations.
doi:10.1038/news.2011.180

Tenopir C, Allard S, Bates BJ, Levine KJ, King DW, Birch B, Mays R, Caldwell C. **Perceived value of scholarly articles**. *Learned Publishing* 2011;24(2):123–132.
Results from a questionnaire are presented: over 400 researchers in 12 countries responded, ranking seven article characteristics and rating 16 article profiles. After article topic, the next most highly ranked characteristics were online accessibility and source of article. There were significant differences in ranking by discipline and geographical location.
doi:10.1087/20110207

SCIENCE COMMUNICATION

Cryer E. Collins M. **Incorporating open access into libraries.** *Serials Review* 2011;37(2):103-107.
Librarians can play a dynamic role in the development of the open access landscape by familiarizing themselves with government funding initiatives, OA publishing models, institutional OA funds and policies, and institutional repositories. The article provides examples of how librarians can incorporate OA issues into pre-existing librarian roles.
doi:10.1016/j.serrev.2011.03.002

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Updated EASE Guidelines promote research integrity worldwide

The recently updated *EASE Guidelines for Authors and Translators of Scientific Articles* are an innovative way to promote not only effective scientific writing but also research integrity worldwide. The document has already been translated into 15 languages: Arabic, Bangla (Bengali), Chinese, Estonian, French, Italian, Japanese, Korean, Persian, Polish, Portuguese (Brazilian), Romanian, Russian, Spanish, and Turkish. Several new translations are in progress. The original and translated versions are freely available in PDF format on our website (http://www.ease.org.uk/guidelines/index.shtml). For easier reading on line, individual sections of the English version are also displayed directly on the website, with active hyperlinks to the references and to eight concise appendices on selected issues.

The editorial guidelines published so far by other organizations (ICMJE, for example) are available only in English or in two or three languages and are generally longer, intended mostly for editors. As a result, only a very small proportion of scientists are acquainted with them. By contrast, the key to our multilingual guidelines is their simplicity, such that even inexperienced authors find them easy to read and are thereby encouraged to use them. Most of the text is formatted as bullet points, with key phrases printed in bold. More detailed information and examples, where required, are provided in appendices. The list of references and further reading includes major editorial guidelines, handbooks, and websites providing useful information on scientific writing (with hyperlinks to online versions wherever possible).

In the updated edition, we paid special attention to ethical issues. More precise guidance is given about authorship, acceptable secondary publication, objective discussion of results, avoidance of plagiarism, the need for consent from all people named in the acknowledgements, etc. Moreover, a new appendix about ethics was added. The appendix is a pioneering compilation of authors' major ethical declarations, listed on one page. It reminds authors about all the basic principles of ethical experimentation and scientific writing. The appendix can be easily printed, ticked, signed, and sent to the editorial office with a submitted manuscript.

Another new appendix added to the updated guidelines is concerned with text-tables. They are effective but underused tools for presentation of small data sets, so we want to facilitate their popularization.

Our guidelines are promoted on many websites and several articles about the guidelines have been published. Basic information about them is also available in Wikipedia in several languages. To aid in their further promotion we will apply for their formal endorsement by other organizations.

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EASE Business

TALLINN CONFERENCE

Plenary speakers confirmed

Plans for our 2012 congress, "Editing in the Digital World", in Tallinn (which coincides with our 30th anniversary) continue to develop. The conference will examine how the transfer of science publishing into the digital environment affects editors and writers in their daily work and how best to exploit the new technologies. All four plenary speakers have accepted their invitations:

- "National Journals in an International Context" Juri Engelbrecht, Estonia
- "Open Access and Digital Models" Deborah Kahn, BioMedCentral, UK
- "Social media and science editing/publishing" Alan Cann, University of Leicester, UK
- "The Editorial Office" Linus Svensson, *Oikos*, Sweden

Six parallel sessions, on the following topics, will also be available. Outlines of these sessions are available on the EASE website. Anyone wishing to participate in one of these should send a short abstract to Joan Marsh (Jmarsh@wiley.com) by 15th September.

- From national to international: benefits of the digital era for regional journals
- Publishing data
- Science translation, editing, and readability
- Digital tools for detecting misconduct
- Local assistance for scientists and institutes by journal editors
- Improving peer review management reporting: creating powerful internal reports and meaningful editorial board presentations

In addition, Elisabeth Heseltine and Pippa Smart have agreed to present their courses, "Writing a scientific paper and getting published" and "How to be a successful journal editor", respectively.

Marking 30 years of EASE: call for memorabilia

The year 2012 marks the 30th anniversary of EASE's founding (Pau, 1982). We would like to document these first three decades with a history of major events in the life of our Association and with stories and a display of physical artefacts that tell the EASE story. Please send us:

- Photos of EASE events (with legend and names if possible)
- Names of people who should be honoured with an anniversary diploma because of their work for EASE (please add a few sentences of explanation)
- Conference newsletters
- Posters of EASE events
- Short anecdotes about memorable moments (good, bad, sad, funny)
- Souvenirs of any kind

plus – any ideas for special anniversary events in connection with our Tallinn conference.

Contributions and ideas should be sent to Sylwa Ufnalska (sylwia.ufnalska@gmail.com) or Alison Clayson (alison@clayson.org)

ISMTE conference discount

ISMTE are offering EASE members a 20% discount on ISMTE's European conference non-member registration fee (currently $245) for their conference in Oxford on 18th October. Contact the EASE Secretary (secretary@ease.org.uk) for details.

Forthcoming Meetings, Courses, and BELS Examinations

STM: International Association of Scientific, Technical and Medical Publishers
Developing leadership and innovation
12-14 September 2011; Witney, UK
http://www.stm-assoc.org/events/11th-master-class-europe-2011

ALPSP International Conference 2011
14–16 Sept 2011, Heythrop Park, UK
http://www.alpsp.org/ngen_public/article.asp?aid=335158

Technical Communication UK Annual Conference
20–22 September 2011, Thame, UK
www.technicalcommunicationuk

Open Access Scholarly Publishers Association 3rd Conference
21-23 September 2011; Tallinn, Estonia
http://www.oaspa.org/coasp/

SfEP 22nd annual conference
Skills, freelancing, education, practice
25–27 September 2011; Oxford, UK
http://www.sfep.org.uk/pub/confs/conf11/conf2011_advance.asp

STMAnnual Frankfurt conference
Biting into the core: challenging peer review and its ilk
11 October 2011; Frankfurt, Germany
http://www.stm-assoc.org/events/stm-frankfurt-conference-2011

National Association of Science Writers
Science Writers 2011
14–18 October 2011; Northern Arizona University, USA
http://www.sciencewriters2011.org

Knowledge Globalization Institute
Fifth knowledge globalization conference 2011
15–16 October 2011; Boston, USA
http://www.kglobal.org

IEEE Professional Communication Society: International Professional Communication Conference 2011
Communicating sustainability
17–19 October 2011; Cincinnati, USA
http://ewh.ieee.org/soc/pcs/

International Society of Managing and Technical Editors (ISTME)
European conference
18 October 2010; Oxford, UK
http://www.ismte.org

METM11: Quality in English translation and editing – from research to practice and back
20–22 October 2011; Barcelona, Spain
www.metmeetings.org

EMBO/EMBL Science & Society Conference
Making sense of mental illness: biology, medicine and society
4–5 Nov 2011; Heidelberg, Germany
http://www.embo.org/science-society-conference-2011

Council of Science Editors Annual Meeting
18–21 May 2012; Seattle, USA
http://www.councilscienceeditors.org/

11th EASE General Assembly and Conference
Editing in the Digital World
8–10 June 2012; Tallinn, Estonia
http://www.ease.org.uk

COURSES

Editing medical journals short course
2–4 November 2011; Oxford, UK
http://www.pspconsulting.org
pippa.smart@googlemail.com

ALPSP training courses, briefings and technology updates
Half-day and one-day courses and updates.
Contact Amanda Whiting, Training Coordinator, Association of Learned and Professional Society Publishers, Tel: +44 (0)1865 247776; training@alpsp.org; www.alpsp-training.org

Publishing Training Centre at Book House, London
Contact: The Publishing Training Centre at Book House, 45 East Hill, Wandsworth, London SW18 2QZ, UK. Tel: +44 (0)20 8874 2718; fax +44 (0)20 8870 8985, publishing.training@bookhouse.co.uk
www.train4publishing.co.uk

Society for Editors and Proofreaders
SfEP runs one-day workshops in London and occasionally elsewhere in the UK on copy-editing, proofreading, grammar, and much else.
Training enquiries: tel: +44 (0)20 8785 5617; trainingenquiries@sfep.org.uk
Other enquiries: SfEP, Erico House, 93-99 Upper Richmond Road, Putney, London SW15 2TG, UK. Tel: +44 (0)20 8785 5617; administration@sfep.org.uk; www.sfep.org.uk

Society of Indexers workshops
The Society of Indexers runs workshops for beginners and more experienced indexers in various cities in the UK.
Details and booking at www.indexers.org.uk; admin@indexers.org.uk

University of Chicago
Medical writing, editing, and ethics are among the many courses available.
Graham School of General Studies, The University of Chicago, 1427 E. 60th Street, Chicago, IL 60637, USA. Fax +1 773 702 6814.
http://grahamschool.uchicago.edu

University of Oxford, Department for Continuing Education
Courses on effective writing for biomedical professionals and on presenting in biomedicine, science, and technology.
Contact Leanne Banns, CPD Centre, Department for Continuing Education, University of Oxford, Littlegate House, 16/17 St Ebbes Street, Oxford OX1 1PT, UK.
Tel: +44 (0)1865 286953; fax +44 (0)1865 286934; leanne.banns@conted.ox.ac.uk
www.conted.ox.ac.uk/cpd/personaldev

BELS - Board of Editors in the Life Sciences examination schedule

(www.bels.org/becomeeditor/exam-schedule.htm)

18 September 2011: Rowan University, Glassboro, NJ; register by 28 August

16 October 2011: Mumbai, India; register by 25 September