

# Scholarly publishing: a partnership with mutual benefits and individual responsibilities

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[This article is an editorial. It has no abstract and should be formatted accordingly.]

## Passing on the CERP baton

After more than seven years as editor of *Chemistry Education Research and Practice* (CERP), I am standing down from this role, and this will be the last editorial of my tenure. Indeed, by the time this editorial appears in the first issue of the 2019 volume, I will have handed over to Michael Seery, who has been one of the Associate Editors, leaving the editorship in very good hands. It was suggested to me that this might be a good opportunity for reflecting back on my time as Editor. One of the most obvious themes that came to mind was how academic publishing involves a partnership among a diverse ‘team’ of people (see figure 1) - each with their own roles and responsibilities.

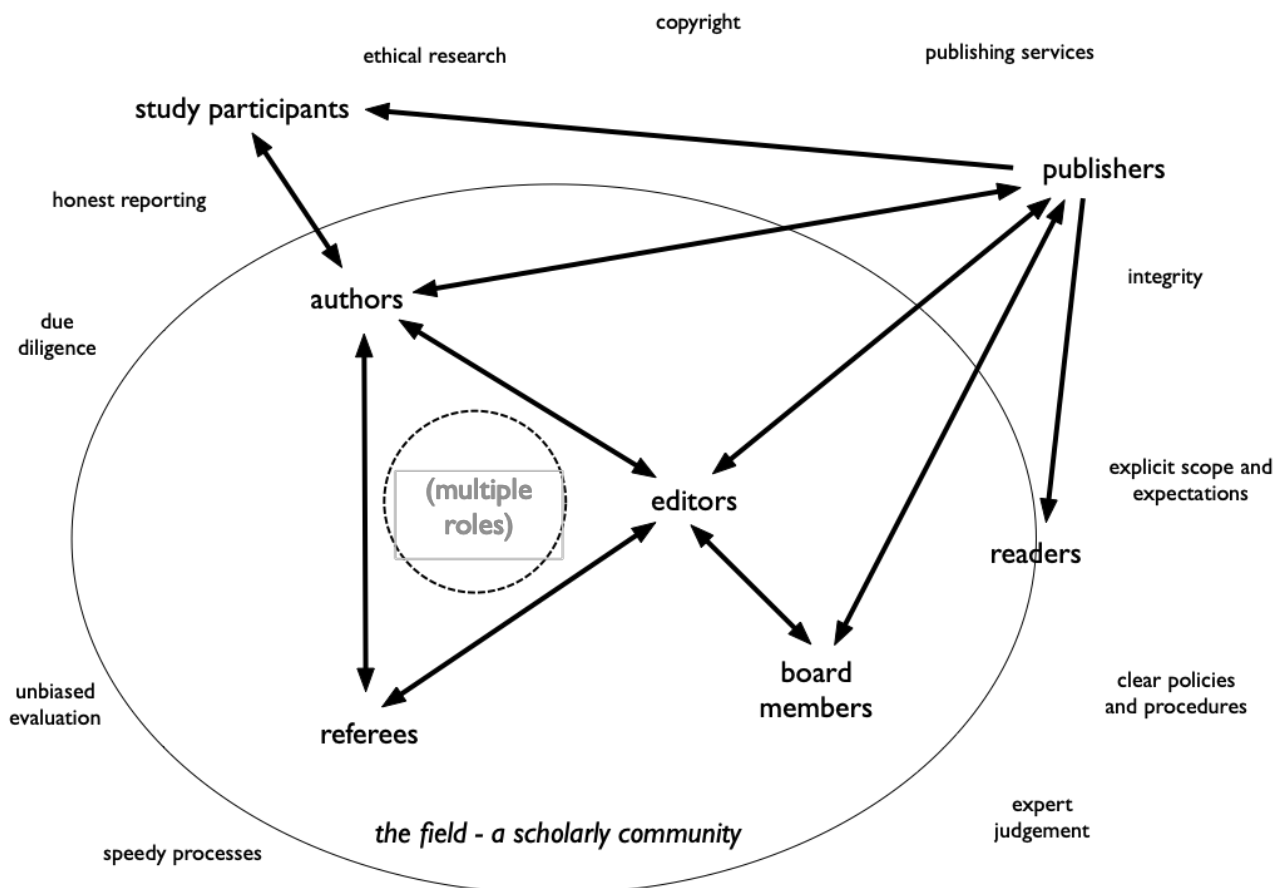


Figure 1: A successful research journal relies upon a network of people with different (and sometimes multiple) roles taking their responsibilities seriously

### *Being part of the team*

In particular, I would like to acknowledge that whatever CERP has achieved during my editorship has not been due to my own qualities and efforts, but rather to that extended team of which I was just one part. CERP would have published nothing during my tenure without the efforts of authors submitting their manuscripts and colleagues prepared to act as expert reviewers. But there also would not have been a journal to edit had it not been for the editors who had established the journal and its predecessors (*Chemistry Education:*

*Research and Practice in Europe*, and *University Chemistry Education*) along with the many colleagues who supported them in that venture. CERP, certainly in its current, professionally designed, form, also relies upon a high quality and effective academic publisher. That is the Royal Society of Chemistry (RSC), a leading science publisher with a mission informed by also being a learned society, and a professional body.

I was also especially fortunate to have been invited to edit a journal on the basis that authors would not be expected to pay publication fees, yet the material selected for publication would be made freely available on the web to anyone who wished to access it. That was possible because the RSC sees educational work as part of its charitable mission. By supporting chemical education, including classroom teachers and the researchers who inform their work, the RSC seeks to help secure the future of chemistry. Even so, seeing CERP as an investment worth supporting from the Society's resources was (and, indeed, is) not inevitable, but reflects the support given to the journal by the Council of the Education Division. As a membership organisation, RSC members' priorities and views have to be taken seriously by the professional officers employed to carry out the Society's work. As an organisation of professional chemical scientists, the RSC has a governance structure that gives its members (through their 'Divisions') a major role in influencing the direction of the Society.

This generosity has allowed CERP to not only be read by those working in those Universities and similar institutions with sufficient library funding to purchase institutional subscriptions to RSC journals, but also by both academics in universities and teacher training colleges in those developing countries with limited access to resources, and classroom teachers at any level anywhere in the world. Naturally, a Society has to spend its funds carefully, and this policy is rightly open to review, but I am sure many readers of CERP recognise the value of supporting educational research and scholarship by providing a means for publication that is not limited by author funds or reader wealth, and which shares scholarly knowledge for the benefit of all, regardless of ability to pay. Of course, many academics in well-resourced universities do access CERP through institutional access to the RSC's publications, thus CERP also contributes to the value and profile of the RSC journal package.

The work of the journal has been supported by its Editorial Board, under a succession of Chairs (currently Prof. David Treagust, of Curtin University) who have been available to offer wise counsel when called upon, and an international Advisory Panel; as well as by a team of people working in the editorial offices at RSC Publications, and the oversight of a managing editor. Recently, the journal has operated with a team of editors, including not only Michael, but also Ajda Kahveci and Scott Lewis. It would be possible to say much more, and to name many more individual people (which would certainly be deserved) - but the point is that a journal relies on a distributed partnership.

### *Observing a shared vision from different vantage points*

Clearly, in any such network, different people bring different skills and expertise and have different responsibilities relating to their particular roles. Anyone failing to take their responsibilities seriously can let down a team and its wider enterprise (such as a journal) and I have been very lucky to have worked with such professional, committed, and competent, colleagues. There has always been a sense that the editorial board, the academic editors, the publishing staff, and the publishers and managing editors, have worked towards common goals and purposes, such that when different role perspectives sometimes, surely inevitably, lead to potential tensions about priorities, such differences have been recognised as being well-motivated.

Mutual respect and a sense of being part of a team with shared purposes provides a partnership for moving forward and responding to such tensions constructively. Indeed, part of the responsibility of having a particular role in such a diverse team is in representing the specific interests and concerns associated with that role, and I would suspect that a journal team that never faced difficult discussions is not blessed with a full complement of conscientious critical friends representing the different interests at play.

### *The wider partnership between authors, reviewers, editors, and publishers*

Similar considerations apply when considering the nature of academic publishing more widely, beyond those with a formal role with a journal. For the enterprise to work well, to the benefit of the wider community, different people need to understand their roles and

responsibilities - and to behave accordingly. Academic publishing has built-in safeguards to avoid some potential problems, but occasionally things can go wrong - particularly when people are ignorant or, of disregard, their role responsibilities. That such problems are occasional (at least in the area I know about, chemistry education and more widely science education) certainly reflects well on the community. However, issues and predicaments can arise - perhaps inevitably given the nature of the human beings that we all are.

## **Editorial responsibilities**

One of the tasks of an editor is to screen submissions. Peer review relies upon the goodwill of colleagues giving up their valuable time to evaluate a submissions. Submissions may be off-topic for a journal, or may be clearly inadequate in terms of the kind or quality of work submitted. Sending such material to peer review delays an inevitable rejection, and adds unnecessary workload to busy volunteer reviewers - and so is irresponsible. Immediate rejection may be disheartening for authors, but is surely less frustrating than a deferred outright rejection: it allows an author to move forward, and is therefore in everyone's best interests. Those journals that are administered by non-specialists who do not have the expertise or responsibility to make immediate rejection decisions do no favours to authors, and waste the time and goodwill of reviewers.

That said, there is a careful judgement to be made, and editors should always keep in mind that part of the rationale for having a peer review system is that editors are advised by subject experts. So there is a balance of considerations at work here. An editor who sees their role as primarily technical, seeking and acting on peer review, risks overseeing a journal that makes inconsistent publishing decisions and lacks a clear sense of direction and 'personality'. This is why the top journals seek leading academics in the field who can make decisions from a position of authority, and who have a sense of vision for the field. (And I have seen how our new editor, Dr Seery, has been serving and influencing the field through his work with the Chemical Education Research Group and as the chair of the Editorial Board of *Education in Chemistry*). On the other hand, as they say, power corrupts and editorial power can corrupt absolutely. Well, at least, there is a danger of the expert editor seeing themselves as sole arbiter of what is good and worthy, and so of the journal (in effect, the journal-as-manifestation-of-the-editor) trying too hard to lead and shape the field,

and not being responsive enough to promising research directions emerging among the wider scholarly community. So the ideal editor has the confidence to make definitive and clear decisions, but the humility to be recognise limitations and fallibility, and so to know when they should first seek further advice.

### *The editor's decision is ...*

Editors should then take upon themselves full responsibility for their decisions, but only make those decisions when they consider they have sufficient evidence to reach a fair and informed judgement. Fairness applies to both the author who may have put heart and soul (metaphorically, of course) into their submission and also the reviewers who doubtless have many other calls upon their time. There is a sense, then, that editors 'protect' reviewers from pointless assignments (where a paper is clearly never going to be published in the journal, regardless of potential revisions) but should be prepared to give authors the benefit of doubt unless they are confident of the basis for an immediate rejection.

Sometimes editors can take an intermediate stance and reject a submission, but offer guidance on where it falls down. This approach has been increasingly adopted in CERP in recent years: offering feedback that falls short of a full peer review, but highlights key areas for development rather than simply giving a stark rejection at the initial screening stage. That can be valuable to a new researcher (perhaps not fully appreciating what is needed) who may omit important aspects of a research report making full evaluation in review impossible - a feature that a surprising number of submissions share - but who may have the necessary information to update the submission (or the motivation to undertake any additional work needed before a study is ready to be reported). In such cases the editor's rejection may be accompanied by a potential invitation to make a new submission if certain things can be included in a new manuscript.

There are sometimes nuanced judgements to be made here, and editors can sometimes get decisions wrong, but the editor's responsibility is to do their best in giving suitable submissions a chance in peer review and yet making immediate rejections where there seems no value in a full review - for example, where it seems inevitable that referees will respond that a proper evaluation is simply not possible because the submission lacks sufficient detail of, perhaps, the teaching being undertaken during an intervention, or of the

instruments used to collect key data that are the grounds for conclusions and recommendations.

### *Making editorial policy explicit*

Potential authors who are submitting work in good conscience, and who are prepared to undertake ‘due diligence’, have to be supported in avoiding immediate rejections. If a journal has a specific scope, and if it requires particular things of its contributors, then the journal team have a responsibility to make this information explicit and available to potential contributors so they do not waste time and energy submitting articles that are off-topic, or have serious omissions. Typically, such information appears on journal websites.

During my time as editor for CERP, I have also used editorials to provide supplementary advice to detail and explain expectations to potential authors - mostly in response to recurring issues that have arisen from scoping enquiries, or during screening or peer review, that led to me to believe more guidance may be useful to support authors in appreciating what is expected of an article in CERP. Table 1 specifies a number of the editorials that have included this kind of guidance.

Theme	Issue	Title	Editorial
Scope	Types of articles sought for publication - and expectations for what is included.	Recognising quality in reports of chemistry education research and practice.	Volume 13 (Issue 1) doi: 10.1039/C1RP90058G
Scope - reporting practice	The requirements for an account of innovative practice to be suitable for reporting as a research paper.	What is wrong with ‘practice’ papers	Volume 17 (Issue 4) doi: 10.1039/C6RP90009G
Scope - demarcating the field	Discriminating chemical education research from other research carried out in chemistry teaching contexts.	Three levels of chemistry educational research	Volume 14 (Issue 2) doi: 10.1039/C3RP90003G
Scope - responding to published articles	The nature of ‘Comments’ and ‘Replies’ considered for publication.	The role of interpretation in inferring student knowledge and understanding from research data	Volume 16 (Issue 3) doi: 10.1039/C5RP90008E
Authorship	Applying authorship criteria in establishing author lists.	Who counts as an author when reporting educational research?	Volume 14 (Issue 1) doi: 10.1039/c2rp90014a
Ethics	Requirements for studies that involve human participants.	Ethical considerations of chemistry education research involving “human subjects”	Volume 15 (Issue 2) doi: 10.1039/C4RP90003K

Randomisation	Minimum details required to justify a claim of randomisation in a study.	Non-random thoughts about research	Volume 14 (Issue 4) doi: 10.1039/C3RP90009F
Appendices	Use and format of appendices for supplementary material.	Supplementing the text: the role of appendices in academic papers	Volume 17 (Issue 1) doi:10.1039/C5RP90014J
Translation	The requirements: (a), to explicitly report that data (or instruments/resources) reported are translated from another language; and (b), to offer assurance of the quality of translations.	Lost and found in translation: guidelines for reporting research data in an 'other' language	Volume 19 (Issue 3) doi: 10.1039/C8RP90006J

Table 1: Appendices sharing editorial expectations with potential authors of the journal

## The responsibilities of authors

Authors also have responsibilities. Authors should offer full and clear accounts - and if they always did so less manuscripts would be rejected summarily. However, not everyone working in the field has had the benefit of completing full research training with mentorship of an existing experienced scholar in the field - and no one can blame those without access to such resources (especially in some parts of the world where the field is not yet well established) from doing their best, yet still offering an inadequate submission. In an ideal world, the international community would offer mentorship. A journal does not have the capacity to do this formally to any degree, but hopefully provides constructive advice on what needs attention.

What is not acceptable, and indeed may sometimes be harder to spot, is where authors deliberately enhance reports to cover up limitations or deficiencies in their research. This does not seem (n.b., as far as we know!) to happen often, but I have seen (in reviewing for other journals) an example of where sample sizes seemed to have been deliberately inflated. That only came to light through the coincidence of being asked to review different versions of the same study for different publications, and would not have been apparent to someone only having access to one version of the submission. Pressure to publish can be severe, and it may seem harmless to falsify something like sample size (perhaps based on a referee



comment along the lines that a small sample undermined drawing implications from a study, which an author may have felt was ill informed if the sample was the entire available cohort) but one would hope that any researcher would recognise that the whole scholarly edifice quickly begins to become worthless once a non-negligible proportion of research reports are fictional.

### *Ignorance is not bliss*

Genuine errors, of course, can happen - and we all make mistakes sometimes. One basic example is the misuse of the notion of randomisation - something key to some methodological choices (if irrelevant, or even inappropriate for some types of research design). It became clear to me that it is not just the occasional author who makes claims of random assignment without appreciating that this requires a careful (if often very simple) rigorous process, and is not the equivalent of making an arbitrary assignment. Thus the need for offering guidance for authors on this point (see Table I). To many of us it may be surprising that some of our colleagues do not appreciate this: but as they say, you do not know what you do not know!

Similar points may be made about authorship disputes. These can occur because people do not understand the expectations; or because in some situations the basic guidelines need careful interpretation; or because someone who knows the rules decides to exclude or include authors inappropriately for some personal motive (to curry favour; to take more credit; to enter an authorship cartel that boosts its members' publication lists). The first type of case invites better education for new scholars, but there should be no blame on the ignorant when such guidance was not available. They say ignorance of the law does not provide mitigation when a criminal offence is committed: but in the educational community we all have to recognise that our knowledge is partial and flawed - this is perhaps the most generalisable finding from decades of work in science education (Taber, 2009) - and our areas of ignorance are immense.

The second kind of case will always sometimes occur (if only because each potential author inevitably brings some subjectivity to sharing out credit for work), but the frequency can be avoided by following simple procedures and protocols from the outset of any collaboration that might lead to published outputs (Taber, 2018). The final type of case should not be

excused. We may understand the pressures that lead to forms of academic misconduct, but we cannot tolerate such behaviours. That is, we may show understanding and compassion for the individual offender, but we must be vigilant to combat the offence.

### *Authors should carry out their due diligence before submitting*

A less serious, but careless, error is submitting a paper to a journal where it clearly does not fit. The chemistry education community has had an ongoing debate about what makes a 'practice' paper (e.g., Ralle & Eilks, 2004), and CERP has a policy that reports of practice have to make a contribution beyond simply being a 'show and tell' of good practice in the author's institution to deserve publication in an international research journal (see Table 1). Yet, it is understandable that *sometimes* a submission may be rejected on that criterion - despite the submitting author(s) considering the work to meet the requirements. Again, someone, that is, someone recognised to have some expertise, needs to make a judgement call.

What seems less excusable is the submission to CERP of papers that are not only not chemistry education research or scholarship (in the opinion of editors and/or expert reviewers) but which are not located by their authors in the field of chemistry education at all. It has amazed me over the years how many manuscripts I have screened which report work in chemistry (or indeed, sometimes, other disciplines!) with no pretence at being about chemistry education, and which it is not possible to construe as having anything to do with chemistry education beyond the trivial sense that someone reading an account of chemical research may learn some chemistry.

Just as editors have responsibilities to carefully consider whether a submission is related to the field before rejecting it as being 'out of scope', surely authors should have a responsibility to look at a journal and perhaps even read how it is described by the publisher, before deciding to submit to it and invite a certain rejection? One is left with the impression that some authors are happy to submit to a journal without doing any basic research to find out what kinds of articles are considered, or to familiarise themselves with the types of work recently published in the journal (i.e., the 'due diligence' I referred to above). This does not improve their reputations as scholars, nor their publication lists.

## *What's in a name?*

There is a debate about the extent to which citing previous papers in a particular journal should be considered by editors and reviewers when evaluating a submission to that journal. Arguably, this should never be a direct criterion, and it is certainly inappropriate and unethical to ask authors to cite more papers from the journal simply as a means to inflate citation statistics (though I have certainly heard informally that some journal editors do behave in this way) - but it seems odd if a submission to a leading journal in a specialised field does not cite any previous work from that journal. It is difficult to understand how a manuscript that is (a) within scope, and (b) is submitted to a top journal in a field, and (c) includes a thorough literature review of its topic, would not need to refer to other work in the same journal. (If a manuscript simultaneously meeting these criteria were to be submitted, then a judgement should certainly be made accordingly, but I have not seen a genuine example yet.)

I might also add that a good editor tries to ignore the covering letters sometimes received with submissions making the case for why the authors feel their contribution fits perfectly in ... a different journal. Sometimes this seems simply to be getting the name of the journal wrong (lack of due diligence again?) At other times it seems to be a letter originally written for another journal which has not been updated for submission to CERP. Both explanations might suggest sloppiness on behalf of authors. (If researchers do not take care about the name of the journal they are submitting work to, then can we be confident they have carefully checked the data and analysis presented in the manuscript they wish considered for publication?) Whilst on that theme, I've not been impressed by the argument challenging my summary rejection of a submission that I felt was not strong enough for peer review that I must be making a poor decision *because* the same submission was only rejected by another journal *after* peer review. (Perhaps if the authors of such a manuscript had not submitted the 'same' manuscript to CERP, but rather had taken into account the peer review comments offered by referees for the other journal in order to improve their manuscript it might have been judged less harshly by CERP.)

## **Peer reviewing: community service, learning opportunity, or competitive sport?**

Reviewers have responsibilities as well of course. Referees may take on the work because they are interested in the field; because they feel they have expertise of value to the community; because they appreciate that if they want their own work reviewed they should offer a *quid pro quo* to the journals they submit to;... but seldom because they have a good deal of spare time on their hands and cannot find anything else to do. Reviewers get some kudos for this kind of service, and so reviewing for good journals can add value to a c.v. (curriculum vitae or résumé), and so may be useful for applications for academic posts or for tenure or promotions. However, referees take very different approaches to their work as peer reviewers. Some see it as offering a brief overall synoptic judgement without feeling the need to provide detailed critique (which is of limited use to the editor or author), whilst others feel obliged to read up on aspects of the submitted work they know little about and even to search out works cited in the text and check their interpretation - something that is very commendable, but reflects an unreasonable expectation from a journal.

### *Can you have too much consistency?*

That said, reviewing can support further professional learning. Some years ago I knew virtually nothing about the Cronbach's alpha statistic (my own research has primarily been qualitative / interpretive in nature), but found it being used as the grounds for validating research instruments in papers I was asked to review. Many authors offer readers no substantive justification for why they have calculated and are citing a value for a statistic, such as alpha. I felt I needed to at least find out some basics about what the stat. was, and why it might be informative. This subsequently developed into something of a minor obsession for a while, as I struggled to relate what I read about alpha, to how it often seemed to be used in research reports.

I found that authors of published research, as well as of manuscripts I had been asked to review, often suggested that alpha was a measure of the 'reliability' of an instrument such as a test of chemical knowledge, and that the important criterion was that alpha should reach at least 0.7, with the higher the value the better. My reading-up of the topic, however,

suggested that alpha measured internal consistency (not reliability as it is usually understood in science in terms of an instrument giving repeatable measurements) of a particular administration of a unidimensional scale (i.e., one intended to measure a distinct unitary construct), and was highly sensitive to the number of items included. So, for example, an alpha of 0.7 for a three item scale needs to be interpreted very differently than an alpha of 0.7 for a 20 item scale. Moreover, very high values of alpha (e.g., 0.95) that were presented as indicators of high quality by some authors actually suggested a suboptimal instrument with too much redundancy. I found sloppy or causal uses of alpha to be widespread in published articles in top science education journals (Taber, 2017), suggesting that other colleagues might also benefit from learning more about the tool.

### *Quality versus quantity*

A recent development has been services which record and certify review work undertaken for different journals - sadly perhaps a sign that many people no longer trust scholars to offer accurate accounts of their service to the community when compiling a c.v. Whilst I appreciate the logic of such services, I cannot help think they will encourage some academics to seek to undertake frequent reviews indiscriminately, rather than targeting their efforts on offering detailed high quality critique when offered assignments close to their own expertise. I have seen one scientist's claim of reviewing several hundred academic papers per year: I am not sure that is a claim that would lead a potential interview panel to think that the researcher was a careful and thorough scholar. This workload might be feasible for someone who did little else - but a full-time referee would not qualify as a *peer* reviewer. Although journals depend upon peer reviewers, the service of referees cannot be primarily measured in terms of the number of reports completed.

Having accepted an assignment, it is possible that the manuscript seems quite different from what the reviewer expected based on a title and abstract. If so, it is acceptable, and indeed may be appropriate, to withdraw (without losing face) and indeed the fault may be more a matter of an incomplete or unhelpful abstract than an insufficiently selective acceptance of the assignment by the potential reviewer. More often, reviewers may feel they have partial expertise - being in a strong position to critique, and offer constructive advice on, the theoretical framework, perhaps, but not the details of a particular methodology or research design or analytical technique. This may be quite common as in a specialist field there may

be no suitable reviewer who can address all aspects of a manuscript outside of the authors' own group and other collaborators.

The editor's responsibility is to find reviewers who can collectively 'cover the bases', whilst a reviewer has a responsibility to acknowledge any areas of relative weakness to support the editor in this task. As a reviewer, I have sometimes pointed out to editors that I can only offer a superficial evaluation of some specific quantitative analytical techniques, and that I hope and recommend that this aspect of a manuscript is being looked at by another reviewer.

## **Entering into a legal contract**

A key issue in publishing concerns rights and contracts. A publishing agreement is a legal contract where a publisher agrees to publish work for an author - and both parties have responsibilities under that agreement. Publishers normally promise to publish the work in a timely, professionally formatted, and accessible form, and may (in the case of books, for example) promise certain support for marketing the work. Authors or editors of books normally receive a modest share (royalties) of the income taken by the publisher for sales, and contracts usually also deal with issues such as subsidiary rights - such as when another publisher wishes to undertake a translation of a work. Journals do not tend to offer royalties to authors, but will provide services in editing, and design, and may promise a quick turn around. In my experience the RSC offers a very good service.

### *Balancing quality with speed*

Submissions to CERP have normally been screened by the editor within 24 hours of submission, and either rejected or passed to a handling editor. I have always tried to assign referees immediately - although reviewers may not reply to invitations straight away, and very occasionally I have seen submissions where finalising reviewers has taken some time because a large number of reviewers have, in turn, declined the assignment. Those would be 'outliers', and it is more often the case that the referees first approached agree to review. I assume this is because the journal has a college of referees who recognise that we seek to offer relevant assignments and take referee comments and recommendations very seriously.

CERP has no steer to seek to reject manuscripts to inflate the rejection rate (often seen as a quality indicator) nor to seek to publish large numbers of manuscripts to meet particular targets. Rather decisions are purely criterion referenced: potentially (if unfeasibly) all submissions would be accepted if they all met quality criteria, just as all would be rejected if they all fell short.

Editors have a responsibility to moderate as well as give due weight to reviewer recommendations: to balance competing views, to seek additional viewpoints if initial reports do not provide a strong basis for a clear decision, and ultimately to use their own judgement when there are genuine disagreements among peer reviewers. Ideally, we would want authors to be able to revise their submissions sufficiently to meet any reviewer concerns so that everyone is satisfied - an article gets published, but as improved through responses to peer review. Despite taking such a constructive perspective, editors have to be prepared to recognise when this is not going to happen and authors are simply not able to address serious concerns about an article's quality. I have always tried, and usually succeeded, in looking to make a decision within a day or so of the completed reviews being available.

I have felt obliged to do that as the RSC itself works quickly. Articles may be published within a couple of hours of acceptance (as a manuscript 'accepted' version) and the proofs usually get sent to authors within a matter of days. In the case of CERP, where authors do not currently pay fees to publish their work, this is an exceptional service, and I have always felt privileged to be part of this enterprise: my experience as an author elsewhere is sometimes quite different. Indeed CERP sometimes rivals the turn-around promised by those journals with much less substantial and rigorous peer review processes and quality criteria. I have even heard informally that at least one major 'competitor' journal has revisited its own procedures in view of what CERP was offering.

### *Publishing is a moral (rights) issue*

Authors also have responsibilities to keep their side of the contract. One of these issues concerns copyright. Authors are recognised to have moral rights in their works, including copyright - the right to control the copying of their work. However, in entering into a publishing agreement it is often the case that an author is offered publication on the basis of

assigning or licensing these rights to a publisher. Publishers assigned such rights may then allow manuscript preprints to be circulated in limited ways, but if a publisher is to put effort into preparing a professional copy for publication, authors should respect any limitations that they have signed up to on the circulation of that final 'version of record'. So if the publisher does not allow authors to put the published version on open access websites and scholars' sharing sites (at all, or within a given embargo period) then the author should not do so. (With papers published in CERP it is always possible to direct readers to where they can download a free copy - so this does not restrict access.) The RSC allows authors generous re-use of published materials in teaching, in an author's thesis, in future publications, and so forth: but all publishers have their own rules set out in their publishing agreements and authors should check and abide by the specific rules in particular cases.

Publishers generally see it as their responsibility to protect the copyright in published works, and, for example, look to remove pirate copies of publications from unauthorised websites (most authors of books will, if they search, find pdf copies of their works being offered for free to tempt visitors to dubious websites). Again the author has responsibilities. In signing the publishing agreement the author gives an assurance that the work submitted for publication is entirely the copyright of the author. This may not be true if the author has lazily 'cut and pasted' large segments of an already published work that they have previously licensed to another publisher. Some authors (probably inadvertently) 'sell' exclusive rights to the same product to different publishers. These authors may assume they retain copyright on their previous works despite having already offered it to publishers in return for consideration - which may be financial or the service of publishing the work. Most publishers are perfectly happy for authors to republish a limited amount of previous material, as long as they use a set form of acknowledgement to the prior publication - a very small thing to ask of authors.

### *Handling stolen goods*

Authors will also sometimes carelessly present the work of others as their own. Authors who scan or download images from textbooks or websites are likely presenting work that belongs to others, and that they are not in a position to include legally in their own publications without express permission. Some authors do not discriminate plagiarism from copyright and so assume they can reproduce anything as long as it is with attribution.



Sometimes authors assume any image on the web is offered copyright free, or that textbooks that are widely used (especially if 'official' national texts) are in the public domain and anyone should have a right to reproduce parts of them. Many authors do not seem to appreciate that whilst a scholarly text that is copyright can often be freely quoted within certain limits (due to a conventional 'fair use' copyright exemption for scholarship or criticism/review) as long as the source is cited, this does not apply to designs such as figures or tables which can only be used with explicit permission (which sometimes is only granted for a fee) unless redrawn in a substantially altered form. If a publisher was sued for republishing material without permission then the publisher would be entirely within its right to seek recompense from an author who had claimed a submission was 'all their own work', thinking the occasional borrowed image did not count. This could potentially be an expensive slip.

The oft-seen term 'copyright-free' is unfortunate, as (certainly in English law) copyright is automatic, and so recent works are never free of copyright: but of course a copyright owner may choose to waive their right to control copying and give permission for free use of materials. Whether scanned/downloaded images freely incorporated in teaching materials restricted to a single classroom are infringing copyright may be a question that is unlikely to ever be legally tested: but if such materials are then used in research publications reporting on the teaching concerned, then this becomes a very clear case of the publisher needing to know that the legal copyright owner has given permission for use in the publication.

Copyright is not the only moral right offered to authors in law in most countries. Authors are also given the right to be named as the author of a work - thus the wording in the front material of many books reporting that some person asserts their right to be named as the author of that work. Actually, the author is allowed to choose whether they prefer to be anonymous, or to use a pen name, although this is unlikely to be something an academic publisher would allow for scholarly works. However, those readers who have come across, and maybe even used, Student's t-test may not appreciate that Student (1908) was a pseudonym for a statistician whose employers did not wish him to publish work under his own name!

## *The integrity of the lustful scientologist*

Authors also have a right to the integrity of their work. This means that publishers are not allowed to distort an author's work, as the author would have recourse to legal action to sue for damages. Imagine that I were to write in this editorial that the title of my forthcoming book 'The Nature of the Chemical Concept' was an allusion to the seminal work of the illustrious scientist Linus Pauling (1960), 'The Nature of the Chemical Bond' (indeed, I just have). Now, consider that I find that when this editorial is published the RSC had, after I checked the proofs, changed 'illustrious scientist' to 'lustful scientologist'. In this unlikely event, I would be able to ask for the matter to be put right, or threaten to go to court making a case that my reputation as a scholar had been damaged.

Of course, no respectable academic publisher would be so careless or malicious as to do such a thing. Yet some perfectly respectable publishers, unsure how developments in new technology will impact on scholarly publishing, are asking authors to sign a legal waiver of their statutory moral rights as part of publishing contracts. For example, one contract I was recently offered (and declined) asked me to agree that "amendments, alterations or additions to the Contribution made by the Publisher or an authorized third party, such as the Editor" would not "infringe the Contributing Author's right of integrity in the Contribution which the Contributing Author may now or at any future time be entitled..." (OUP, 2018, p. 2). I was asked to sign to confirm that I waived my legal right to the integrity of my published work.

In effect, the author is here being asked, as a condition of having their work published, to agree that the publisher may make any changes to the author's work or any subsidiary work derived from it, that they see fit, at any time, for any purpose, without consultation with the author and without acknowledging that the published text has been modified from that provided by the named author. It is very hard to imagine any circumstances where a publisher would need to make such changes without (preferably) getting the author's agreement or (otherwise) acknowledging to readers that another party had amended the text. Indeed, when I have asked what such circumstances might require such actions (when told that the waiver clauses was not negotiable in a contract), no one has been able to suggest any.

Despite this, some publishers are routinely asking authors to sign such waivers. This is a situation where publishers, just as authors, need to take their responsibilities seriously. Other leading publishers who had previously adopted such clauses have since withdrawn them from publishing agreements and acknowledged that they are not appropriate in academic publishing. It is hard to see how a careful publisher would accidentally leave themselves open to legal action for damaging a scholar's reputation by corrupting their work on publication - but a publisher who wishes to be taken seriously by scholars will see it is their responsibility to take sufficient care not to make such mistakes, and would not ask contributors to waive protections provided in law.

The law then offers protections to all parties against deliberate or accidental abuses of rights - protection against the author who thinks they can simply reuse a published diagram that is someone else's copyright, or who 'cuts and pastes' from their previous writings even when they have licensed the rights to that work elsewhere; protection against a publisher failing to identify the author of a published article, or making unauthorised changes that distort an author's text when publishing their work. No responsible publisher with careful quality assurance procedures should need to fear legal redress for corrupting an author's work their work, and therefore authors might suspect that publishers asking authors to waive their legal rights should not be trusted with their work. Similarly, publishers have a right to expect authors to be equally carefully in terms of their side of the contract, and - for example - to ensure they are in a position to offer a licence to publish all that is include in their submitted work.

## **Valuing the gift that keeps on giving**

Finally, I want to mention essential partners in the enterprise of publishing research that I have not discussed till this point. These are the research participants, without whom studies would simply not be possible. It has been said that research data is a gift offered to researchers (Limerick, Burgess-Limerick, & Grace, 1996). This can sometimes be an uneven partnership. Authors may be very aware of the debt that research owes to participants - at least at the point of negotiating access and seeking volunteers. Sometimes, once data is collected, there is a shift of focus - perhaps because normally the people who helped us then become (appropriately) anonymised in our analyses and reports. We should seek to

ensure people receive some benefit for their input (and are at least offered information on outcomes), and where all we can offer is the good feeling that comes from an altruist act then we must at least be confident that this act was based on a free choice without coercion or fear of consequences of non-participation.

There is nothing wrong with asking our students, or institutional colleagues, or teachers attending our professional development courses, to voluntarily help us in our research; but we should never take it for granted that they will think there is good reason to volunteer. Procedures and safeguards are especially important in these circumstances (Taber, 2013). We should use our position of greater knowledge and power to protect participants, and certainly should not see them as just the means to an end. For example, we should not set up control conditions that we know are likely to be educationally detrimental in order to make it more likely that an experimental intervention provides (comparatively) positive outcomes.

It is easy to become convinced that our own work is inherently interesting and potentially important - but we have no right to expect potential participants to take that view, and no reason to expect them to see our research as the best use of their time and energies. This is sometimes the ignored or forgotten partnership in academic publishing - and if we want to continue to benefit from the gift of data, then we should always enter such relationships aware of the rights of participants (for example, *their* copyright in *their* own work), and our responsibilities (as well as our gratitude) towards them.

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