

FAQ: Correcting the scholarly record, and dispelling myths around corrections

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Introduction

This FAQ was prepared following the UKRIO webinar '*Correcting the scholarly record, and dispelling myths around corrections*' on the 29th of September 2023, presented by Lauren Flintoft of IOP Publishing and Gráinne McNamara of Karger Publishers.

The recording and slides from this webinar can be viewed here: [Correcting the scholarly record, and dispelling myths around corrections - UK Research Integrity Office \(ukrio.org\)](#).

The following is an attempt to address some of the questions that were asked during the webinar. Rather than respond to each question individually, we have tried to answer the questions as a whole. This information is based on the experience of the presenters, which is informed by industry guidance from the [Committee on Publication Ethics \(COPE\)](#), the [World Association of Medical Editors \(WAME\)](#), the [Council of Science Editors \(CSE\)](#), the [International Committee of Medical Journal Editors \(ICMJE\)](#) and the [NISO/ALPSP Journal Article Versions \(JAV\) Technical Working Group](#) amongst others. We **recommend** you refer directly to these websites and organisations for more information about any of the topics below.

List of terminology

All correction notices have in common that they are issued because a post-publication matter of some kind, often a potential inaccuracy, has been identified in a publication. They are typically separate notices with a unique DOI that is bi-directionally linked to the original publication and, in the majority of cases, the original article is not updated (see exceptions below).

Here is a list of helpful terminology:

Erratum/Corrigendum: Both are notices used to draw attention to, and rectify, an inaccuracy in a publication where the main findings of the work are still reliable. If the editor concludes that the main findings of the work are not reliable because of the error, a Retraction or Expression of Concern is typically issued, rather than an Erratum/Corrigendum. The original article may or may not be updated to rectify the inaccuracy, depending on the nature of the error and the journal/publisher's policy.

Some publishers have distinct uses for each term, for example issuing a **corrigendum** when the inaccuracy resulted from an author error and issuing an **erratum** when the inaccuracy resulted from an editorial or production error; other publishers use the umbrella term ‘correction’. This policy varies by publisher, for example, Karger Publishers issues an erratum in both cases, noting in the text the source of the error. IOPP use both corrigendum and erratum in the way described here.

Notice of redundant publication: This not frequently used notice can be issued when two publications are published containing redundant information, but the conclusions of both are distinct and valid. It also may be issued if one of the redundant publications is retracted and the publisher of the remaining wants to inform readers of the incident.

Expression of Concern (EoC): This notice is issued to inform readers about a **potential problem** with a publication, typically if an investigation is ongoing and the concerns are unlikely to be resolved imminently. This may be, but is not necessarily, followed by another correction notice for the publication. EoCs may also be used when the outcome of an investigation is inconclusive.

Retraction: According to the Committee on Publication Ethics (COPE)

“Retraction is a mechanism for correcting the literature and alerting readers to articles that contain such seriously flawed or erroneous content or data that their findings and conclusions cannot be relied upon. Unreliable content or data may result from honest errors, naïve mistakes, or research misconduct. The main purpose of retraction is to correct the literature and ensure its integrity rather than to punish the authors.” [1]

A retraction effectively marks the content of the publication as null and void because the inaccuracies render the results unreliable. A retraction is the only instance where a publication is updated as standard across the industry.

The content remains accessible, but is watermarked with the term ‘Retracted’, the article title is typically amended to include this term at the start, and a correction notice is issued to the work.

Publishers have a responsibility to make it clear where an article has been retracted and why. The potential reasons for a publication’s retraction are varied, it may be as the results of a lengthy investigation into suspected misconduct, or an author may find a coding error post-publication that undermines their results and conclusions. In all instances, the reason for retraction should be included in the retraction statement.

Publisher’s Note: A publisher’s note, or editor’s note, is a **heterogenous correction** type that is not issued by all publishers. It can be issued to draw a reader’s attention to something that is not captured by any of the other correction types.

Withdrawal: A withdrawal is a correction type that is similar to a retraction in that the content of the publication should not longer to relied on. Each publisher has their own policy as to when, and if, an article is marked as withdrawn instead of retracted. However, this is reflected in the COPE Retraction guidelines (though not called a ‘withdrawal’):

“In extremely limited cases it may be necessary to remove an article from online publication, such as when the article is clearly defamatory, violates personal privacy, is the subject of a court order, or might pose a serious health risk to the general public. In these circumstances, the metadata (title and authors) should be retained and the retraction notice should clearly state why the full article has been removed.” [1]

Unlike when a publication is retracted if a published work is withdrawn, the content is taken down and replaced with a correction notice to explain why the content has been removed. The bibliographic information is retained in the article/chapter/book landing page and the DOI remains valid but directs to this landing page containing only the bibliographic information.

It is rare for content to be withdrawn, as it is expected that publishers retain the scholarly record as much as possible due to the severe and long-ranging consequences that can occur. For example, at IOPP, in order to meet [the withdrawal criteria](#), a work would be expected to be subject to a court order, contain defamatory content, pose a risk to the public, or violate the privacy of an individual.

Investigations

How does an investigation leading to a correction happen?

It is difficult to give a one-size-fits-all explanation of what actions are taken in an investigation conducted by a publisher into concerns about a publication. Each investigation is different, and we cannot comment on the specifics of individual investigations. Below is a general outline of an investigation conducted by a publisher about a publication. If this is a topic you are interested in, we recommend looking at [flowchart resources on the COPE website](#), as most publishers refer to these steps in an investigation.

How does an investigation start?

Speaking generally, the first step is always that a potential concern is brought to a publisher’s attention. The publication in question may be an article, a physical or eBook book chapter, a conference proceeding, a dataset, a study protocol, and so on. The item in question may have been published three months or three decades ago;

there is no time limit after which point it is not possible to question a publication in either Karger or IOPP, even if that title has ceased active publication. This is true for many other publishers, though the exact policy can vary.

A potential concern may be related to:

- the integrity of the data or conclusions of the publication,
- the author byline or metadata,
- the study funding or conflicts of interest,
- the originality of the text,
- the hypotheses,
- research ethics,
- may relate to the peer review process of the publication.

This is a non-exhaustive list of potential concerns that might be raised about a publication. Often an author of a publication contacts the journal office because they have identified an issue. Another common way you might be familiar with is a reader or whistleblower contacting the journal. An editor or reviewer may notice something after publication that warrants investigation.

Publishers also receive notices from institutions, funders or research oversight bodies that have concluded an investigation which may impact the conclusions of a publication. Practice may vary but publishers often follow social media conversations about their content, for example, both Karger and IOPP follow [PubPeer](#) comments on their publications and investigate concerns identified on this website. Importantly, publishers also identify potential concerns in their publications internally through routine audits or indirectly through another investigation.

What happens if a concern about a publication is received by a publisher?

There are many ways that a matter potentially in need of investigation is brought to the attention of a publisher, however, the next step is the same regardless of the source or nature of the concern. The publisher, often a dedicated research integrity team and/or an editor, considers the matter raised and assesses whether there are grounds for further investigation.

All concerns received should be evaluated on their merits. This may require back and forth with the individual or team that raised the concern for further information or clarification. It may require discussion with the editor/ subject matter expert to understand the concern in context. It may require an internal review of the peer review process for that publication.

This evaluation stage can take between hours and weeks depending on the complexity of the topic and background materials required. In all instances, the individual who contacted the publisher should receive an acknowledgement of receipt of their communication and should be updated at the conclusion of the

investigation. Due to the confidential nature of the investigation, publishers typically **do not provide interim updates** to those not directly involved in the investigation.

Once a decision has been made to investigate a concern or potential inaccuracy in a publication, the usual next step is to contact the corresponding author of the publication, neutrally explaining the subject that has been raised and asking for their comment. Publishers typically give a date by which they expect to receive a response. If no response is received, additional reminder emails are typically sent to the co-authors. This timeframe varies depending on the individual publisher's policy. The CLUE guidelines advise that "*when journals have well-founded suspicions or evidence of falsification or fabrication they should consider informing the institution at the same time as, or before, they contact the author(s)*" [2], though such cases are rare in practice

How does an investigation end?

When a response is received from the authors, an evaluation stage similar to the one above is described. This may involve several rounds of back-and-forth clarification requests between the authors, the editor, the subject matter expert, and the research integrity team and may take several weeks or more. Whether the authors' response is considered satisfactory to address the original concerns and whether the publication's findings are reliable determines the next steps. Often, when assessing reliability, the publisher will ask the author for copies of their raw data and any other relevant information and materials to support the required checks for reliability. A correction notice, such as an Erratum/Corrigendum or a Retraction may be issued at this stage, depending on the concern and the impact on the reliability of the findings.

If no response is received, or if the received response is deemed unsatisfactory, the publisher and editor determine the next stage. The publisher may conclude at this point that there is sufficient evidence to issue a Retraction notice or Expression of Concern. The publisher may alternatively, or additionally, contact the institution of the corresponding author to request an investigation.

When the publisher reports the matter to the institution to request an investigation, it can add time to the resolution of the matter as the publisher may have to pause their investigation while the institution investigates. The publisher may issue an Expression of Concern while the investigation is ongoing. Again, this stage can take weeks to months, sometimes even years, depending on internal and external parameters.

The final decision regarding the issuing, or not, of any correction notice is at the discretion of the publisher and the editor, informed by industry best practice. Information provided by the authors, or their institution may inform this decision, but publishers' primary concern is to ensure the content published is accurate, and if the publisher concludes this is not the case, it is the duty as custodians of the content to correct the error with neutral, accurate wording that reflects the inaccuracies in the work.

What happens after an investigation is over?

As mentioned above, when a conclusion of an investigation is reached, the initiator of the investigation will be informed of the outcome, even if the outcome does not involve the publication of a correction. Typically, in the cases of founded concerns about suspected research misconduct, the publisher will inform the corresponding author's institution of the outcome, even if they were not involved in the preceding steps. Publishers are increasingly informing other interested parties, such as any applicable pre-print servers, funders, and data/institutional repositories, of the publication of correction notices.

Each publisher has their own internal policies about who is contacted and when. Due to variations in size, resources and publication workflows, there can be nuances in publishers' correction processes. Publishers are expected at a minimum to operate within industry best practice guidelines (for example [COPE](#)), and some organisations are attempting to help further standardise processes ([NISO CREC working group](#)). [Crossmark](#) by Crossref is a widely adopted mechanism for improving the visibility of corrections associated with publications accessing content so any corrections made to the work are reflected in the version of the work being viewed.

How can communication be improved between all parties in the research system, i.e., readers, corresponding authors, publishers, and institutions, when it comes to corrections?

The CLUE guidelines provide detailed guidance on how to best facilitate collaboration between journal editors and universities [2]. Some additional considerations are included below from Karger and IOPP's perspective.

From a Publisher's perspective, it's often difficult to find the contact details of the Head of the department and research integrity office, if there is one, so improving transparency and standardisation of this information would help resolution of concerns from our perspective. Similarly, publishers have a responsibility to make the information about whom to contact regarding concerns in one of their publications as easy to find as possible, be it from readers, whistleblowers, authors or research institutions.

Authors move institutions or retire and can lose access to their email addresses associated with their publications. Authors can improve the ease of communication by updating the contact information on their profiles with publishers or by **providing persistent contact information** to institutions on departure. This ensures that questions about the publication can always reach the authors.

What does permanency and correcting the record mean in an increasingly digital-first world?

Once content is made available online and/or in print, it is considered **discoverable, citable, and permanent**. Published content is considered a 'snapshot' in time. However, this does not mean that a publication is unchangeable. Publishers have different mechanisms to control the versioning of a publication after a correction notice. In some instances, the original publication is updated when an Erratum/Corrigendum is published (see above for more detail). Some publishers issue a new DOI for the corrected version and a reader can 'toggle' between versions on the online version of the publication. When an article is Retracted or Withdrawn, the original publication is updated, as explained above. Publishers are taking advantage of the digital-first environment to make sure that their content is accurate and rectifying inaccuracies, including participating in Crossmark, as outlined above.

On the other hand, issuing a correction notice is not the most appropriate way to explain how the research has expanded and evolved over time. Some publishers issue an Addendum that can supplement a published article. Living Systematic Reviews are another publication type designed to be updated as the field progresses. Research platforms like [Octopus](#) can connect different elements of a researcher's work together. This is better explored elsewhere and if this is a topic that interests you, please contact your local research oversight department or equivalent body.

Does the publication of a correction impact a researcher's career?

It can be unequivocally acknowledged that mistakes happen and that everyone in the research system has a vested interest in the accuracy of the published record. Part of a good research culture must be one in which mistakes are avoided through planning but acknowledged as a neutral event without assuming intent. A researcher's commitment to transparency and accuracy of the scholarly record should be viewed as a positive trait by institutions, colleagues, and funders.

It has to be acknowledged that, thus far, a correction may have a negative impact on a researcher's career. This may be a direct impact through termination of employment as a result of misconduct or indirectly through the negative cultural association between a correction and a piece of research, or research group, being 'wrong'. This indirect impact is particularly difficult to observe or measure and we understand that the threat of a potential negative consequence for a researcher's career can be a deterrent for researchers against identifying and rectifying inaccuracies in their work.

Some have suggested using different terminology in corrections for **honest versus deliberate error**. However, assigning intent is error-prone and risks delaying the publication of the correction notice. A more fundamental mindset and cultural shift is needed to convert the negative indirect association to positive indirect and direct consequences for researchers as an incentive to correct the record.

Protecting research time for good record keeping and diligent pre-submission processes can minimise the chance that an inadvertent error makes its way into the scholarly record. Routine audits of research by researchers and a willingness to correct inaccuracies should both be recognised as important parts of a researcher's role by research institutions and funders. When it comes to would-be deliberate inaccuracies or misconduct, an institutional promotion of collective responsibility between authors, plus centralised transparent reporting, can help deter inaccuracies from making their way into the record. UKRIO has a lot of resources for institutions looking to foster that culture and many institutions have an active programme around promoting a positive research culture and robust research practices.

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