

EDITORIAL

Reliability of the primary scientific literature

The confidence that scientists and the public have in the reliability of the primary scientific literature stems from a cardinal feature of scientific knowledge itself; that it is public knowledge open to verification by anyone independently, and that its validity does not depend upon the authority of the individual/persons reporting the knowledge. Thus, it has been the norm that extravagant claims made on deliberately falsified data (or wrongly interpreted data driven by an overabundance of enthusiasm) were rare, and exposed early on after publication. Retractions, when made by authors due to honest errors, served to enhance the confidence in scientific knowledge, and is considered a demonstration of the inherent nature of scientific knowledge to correct itself, as it progresses.

However, the large number of retractions by publishers that are now being reported has made a dent in this confidence. It was recently reported in *Nature* that there were over 10,000 retractions in 2023. The reasons for the retractions were multifarious, and included

papers identified as coming from paper mills, papers where images and data had been manipulated and papers published after fraudulent peer review.

Of special interest was the observation that the largest number of retractions were from special issues related to specific topics or conference proceedings. There is a legitimate view that special issues serve a purpose and can enhance the profile of a journal. Nevertheless, it is ironical that special issues today are not special, but have become common, and have lost the original high purpose for which they were intended; to bring together a limited number of papers by established scientists on an emerging topic of relevance and current interest, which could spur on further development.

Editorial boards need to be alert to the increasing amount of malpractice among unethical practitioners professing to be scientists. The COPE documents on retractions provide sound and practical guidelines to minimize the publication of dubious papers which would need to be retracted later.

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